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EDITORIAL

THE OUTLOOK FOR THE INTERN.

It is rather authoritatively stated that no graduation classes in the last three years have contained any number of native-born at the medical colleges of France and that the student body largely consists of foreigners, mostly from South America. In England much the same condition has prevailed.

In this country the situation has been saved by the action of the War Department in placing all medical students, physically qualified, in the Medical Enlisted Reserve. Hospitals, too, have been conserved by enlisting the first-year interns in like manner.

It is generally understood that this plan is to continue, unless grave emergency should dictate a change of policy. Medical schools will now be able to go on in preparing material for service later on, if need still exists.

There is a natural unrest among the civil hospitals over the intern situation for the coming year and thereafter. It is quite certain that all hospitals must come to the one-year service while the war lasts, for, aside from the military need of young doctors, there is in the interns themselves that degree of patriotism which constantly urges them to go into the service, and, while they may be willing to serve one year in a hospital, they will not serve longer than that.

It should not be difficult to arrange for a one-year service and to provide enough interns to go around. It will require the coöperation of the Surgeon General's office to have these graduates, now on military order in the Medical Enlisted Reserve, detailed to particular hospitals for the period of a year.

Such understanding will make for better trained men for the army, as the hospital experience will qualify the interns in a way which will make them at once available for base hospital duty.

The disciplinary regulation which requires systematic report on the interns will make for a better service for the hospital. Hitherto it has been far from easy to get adequate service out of most interns, but now the intern must satisfy the government requirements in the reports to be made at regular intervals by the hospital superintendents. Such intern service from now on should mean more than it ever did before.

It has been a common observation that the hospital intern, for the most part, has never really appreciated his opportunities, but has, in most cases, taken a perfunctory interest in all but some particular field. He supererogates an importance to himself which his position never contemplated or warranted. The military organization needs well trained men and it needs men trained in all fields.

The lack of fitness of many now in the Medical Reserve is obvious, and it is being met, and will be met, by sending such men to schools for instruction. Even men with established ability in some branches of medicine are being sent to schools for instruction in other branches, so as to round out their preparation. The intern has most of such opportunities at hand, if he has the good luck to be attached to a large hospital in a city or has service in a hospital where teaching is carried on.

Physical diagnosis, internal medicine, neurology, with psychiatry,

pathology and laboratory technic, are each as important as surgery, and minor surgery is especially a field for preparation.

The intern in his spare time can study and learn the problems of war surgery as presented in so many valuable contributions in the current medical journals and in books already published. Laboratory men with proper training are needed, and the training in a hospital laboratory is useful.

It takes a short time only to place a qualified man who is willing and apt, and the man with proper hospital training has a great advantage if he fulfils these conditions.

We appear to be at the beginning of a greater struggle, and the largest burden of success will rest on the medical profession and its younger men. The degree of that success must be measured by their willingness and by their ability to engage the task.

VITAL STATISTICS IN LOUISIANA.

The first legal provision for compiling vital statistics for the entire State of Louisiana was made in Act No. 162 of 1900. That act required practicing physicians and midwives to make monthly reports to their respective parish health officers, who, in turn, were required to forward quarterly compilations of such reports to the Secretary of the State Board of Health, by whom all necessary blanks were to be supplied. In any parish where there might be no health officer, reports of births and deaths were to be filed with the Coroner. It was also provided that the Secretary of the State Board of Health should tabulate all such returns thus filed, and should publish same in the bi-ennial report of that Board, as was faithfully done during the decade that followed.

It is to be noted that Act No. 162 made no provision for filing individual certificates, but merely called for a statement of the number of births and stillbirths, according to color and sex, with a similar report of deaths and causes of same. The Secretary of the State Board of Health took advantage of the opportunity to introduce the international (Bertillon) list of causes of death, by printing same on the back of the form supplied for quarterly reports of health officers and by urging all concerned to conform to its nomenclature.

It need hardly be remarked that, while Act 162 paved the way for future progress, the results which it gave were practically worthless for statistical purposes.

Following the Census of 1910, the Louisiana State Board of Health, realizing the inadequacy of the existing law, formally adopted, as Chapter X of the Sanitary Code, the basic principles of the "Model Law" prepared by the United States Bureau of Census, with the collaboration of the American Medical Association, the American Bar Association and the American Public Health Association, with the object of providing for uniformity and efficiency in compiling vital statistics.

It is only since the adoption of that law by a number of States that any real progress has been made in the United States as regards the registration of births and deaths, and if any additional evidence should seem necessary to show its beneficent action, recent progress made in Louisiana speaks for itself.

The essential features of the Model Law are its requirements that a certificate of a standard form shall be filed for each birth and death; that physicians, undertakers, midwives, parents and others specified shall be held responsible, under penalty, for the filing of such certificates, and that adequate facilities be provided for the custody and permanent preservation of all certificates, after same have been duly classified, numbered, indexed and bound as public records of priceless value.

A highly important feature of the Model Law is its provision for the appointment of a sufficient number of local registrars in incorporated towns and adjacent rural districts. The initial difficulty of meeting that requirement was such as to seriously impede the operation of the new system in Louisiana, where the idea prevailed that registrars should all be physicians, and it was not until the President of the State Board of Health secured the consent of the United States Postoffice Department, in 1913, for the twelve hundred and odd postmasters in the State to serve as registrars that a working basis was reached.

In November of the same year the Department of Vital Statistics was reorganized under a "whole-time" State registrar, with an adequate but separate clerical force, since which time the work has increased at such a rate that in 1916 a staff of eight clerks was required. The progress of the work itself may be judged from the fact that in 1913 the entire State, outside of New Orleans, recorded only 1,959 births and 1,654 deaths, while the totals recorded for 1916 were 28,009 births and 14,053 deaths from the same territory.

It is considered highly desirable for Louisiana to be admitted to the Registration Area of the United States Census Bureau, as a con-

dition to which the State must record not less than 90 per cent of an estimated total of births on a basis of 25 per 1,000 of population per annum, and a corresponding total of deaths at a rate of 15 per 1,000 of inhabitants.

To accomplish that result, it is necessary that the people at large, and especially the physicians of the State, give their full and hearty support to the work.

ORIGINAL ARTICLES

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

A DISCUSSION OF SOME PRINCIPLES OF ANTHELMINTIC MEDICATION.

By MAURICE C. HALL, Ph. D., D. V. M.,
Parasitologist, Research Laboratory, Parke, Davis & Co., Detroit, Mich.

There are certain general principles of anthelmintic medication that may be more or less tentatively proposed from the standpoint of theory, or from the clinical experience of many workers, or on the basis of experiments performed in this laboratory up to the present time. Some of these principles seem to me to be fairly well established; others are in contradiction to common beliefs and so open to more suspicion of error. At this stage of our knowledge in regard to anthelmintics, statements should be made tentatively, as a rule. It is a subject which needs and deserves much more study.

The general principles which, for the most part, I wish to discuss, rather than to urge, are as follows:

1. Anthelmintics are selective in their action; at least their dependable effectiveness is limited to certain sorts of worms.

This follows from differences in structure, physiology and habit on the part of the worms. This principle would scarcely seem worth stating or defending, except for the fact that some writers have disputed it. Most medical practice assumes that it is true, and numerous experiments in this laboratory show that certain drugs which display great anthelmintic properties against certain

kinds of worms may be given in doses approximating the lethal dose or given in therapeutic doses over long periods of time without exerting any apparent effect on other worms occupying similar positions in the digestive tract. These experiments, which will be published later in the discussions of anthelmintics, confirm the general idea that certain drugs are of value against tapeworms, but not against nematodes; that others are of value against ascarids, but not against hookworms; that others are of value against hookworms, but not against tapeworms; etc. It is true, to be sure, that such a drug as male fern will occasionally remove some hookworms, and that such a drug as oil of chenopodium will remove an occasional tapeworm, but so far as dependable action is concerned, anthelmintics cannot be used over such a wide range.

Along this same line, it may be said that anthelmintic activity on the part of a drug is not proportional to antiseptic properties and that the published statement to the effect that verminous infestations can be combated best by antiseptic treatment cannot be accepted. Some of the best anthelmintics have very little germicidal power, while experiments show that excellent germicides have little anthelmintic power and that even those displaying a moderate anthelmintic power are usually severe in their effects on the host animal. In passing, it may be noted that germicidal power and insecticidal power are likewise unrelated as a rule.

2. As a further development of the above principle of anthelmintic selectivity, it may be stated that certain kinds of worms require not only a suitable anthelmintic, but also suitable modes of medication, whereas other worms only require the simple administration of a single therapeutic dose of a suitable drug.

The above statement may be briefly elaborated as follows:

(a). Forms like the ascarids, which inhabit the small intestine and lie unattached in the lumen, are readily accessible to the ordinary types of anthelmintics—the type which is usually said to be comparatively insoluble in the host intestine, and so believed to exert its effect on the worms with which it comes in contact while producing a minimum amount of systemic effect on the host owing to low solubility and slight absorption—and ascarids may be entirely removed by a single therapeutic dose of oil of chenopodium in the great majority of cases if only the usual precautions as to preliminary fasting are observed.

In this connection it may be noted that Lutz[1] states that ascarids, probably on account of their size, are more difficult to remove than other worms. All our experience is distinctly contrary to this, ascarids being the easiest of all worms to remove. However, Lutz was referring especially to the necessity for repeated treatments with santonin, and all our experiments confirm the idea that repeated doses of santonin are usually necessary to assure the removal of ascarids. Lutz did not have a suitable drug for the removal of all ascarids at a single dose. As a matter of fact, the action of oil of chenopodium against ascarids in removing 100 per cent of all worms present in a large majority of cases, where it has been properly used in single dose in the experiments in this laboratory, is not duplicated by the action of any other drug in single dose against any worm in experiments here or in the work of Hall and Foster[2] at Washington.

Contrary to Lutz's statement, Railliet[3] states it as a general rule that large worms are more vulnerable than small ones. This accords with our experience: Adult ascarids are more easily removed than larval ascarids or the smaller hookworms; hookworms are more easily removed than *Strongyloides* or the small trichostrongyles, the last two being very difficult to remove, so much so that Stiles[4] has recently stated that no satisfactory treatment for *Strongyloides* in man is known. This condition may arise in part from the ability of small worms to protect themselves by a position in small food masses or under mucus.

(b). Forms like the hookworm, which attach for indefinite periods to the intestinal mucosa and occasionally detach and remain free in the lumen of the intestine for a time before attaching again, show a response to anthelmintics which may perhaps be correlated with this habit of attaching and detaching. In experiments where there is more than a very light infestation it appears that one anthelmintic treatment will usually remove only a part of the worms, and the same is true in clinical experience. As Lane[5] says: "No single course of treatment by any known drug or combination of drugs can be relied upon to expel all the ankylostomes which are present." It is possible that a particular anthelmintic is effective only or principally against those worms which are attached at the time, or only or principally against those which are detached at the time, as the case may be. And it is possible that one anthelmintic would be effective against those which were attached while another might be effective against those which were

detached. If this is true, effective treatment will commonly require repeated doses of anthelmintics in order ultimately to remove all the worms present, or it will require a combination, as yet unknown, of remedies that will exert a complementary effective action, i. e., one acting on the attached and one on the detached worms. Of course, this explanation of the failure of single hookworm treatments to achieve more than partial success, as due to the presence of one attached and one detached group of worms, is only theoretical. Other explanations would be that worms which were feeding at the time of treatment were susceptible to the anthelmintic, that individual worms had greater resistance or were better protected by mucus, etc. There is little evidence one way or another. In support of the idea that successful treatment is related to the attaching habit, there may be cited the suggestion noted by Hall and Foster[6] that the efficacy of chloroform against hookworms may be due to the rapid absorption of the chloroform by the blood and the ingestion of this chloroform-containing blood by the attached hookworms in amounts sufficient to produce anesthesia or lethal toxic effects.

(c). Forms like the whipworm, located for the most part in the cecum, are apparently not always exposed to the action of anthelmintics even when adequate doses of potent drugs are given. This is not merely due to the fact that anthelmintics are partly absorbed and more or less diluted by the time they reach the ileo-cecal valve, though this factor must be taken into consideration in anthelmintic treatment for parasites located in the large intestine, but it is principally due to the fact that not everything that passes the ileo-cecal valve enters the cecum. This is a point that I have previously noted[7] and in this connection I have suggested that in treatment of whipworm cases it may be found good practice to administer anthelmintics in small doses over a long period of time to ensure the entrance of the drug into the cecum. The experiment work done in the laboratories of the U. S. Bureau of Animal Industry and in this laboratory indicates definitely that a number of anthelmintics are effective against whipworms when they come in contact with the worms. As a rule the administration of an anthelmintic brings away no worms, but when it brings away any, as it occasionally does, it not uncommonly brings away all of them. Experiment work done in this laboratory indicates that the administration of small doses—which must not, however, be too small—of anthelmintics over long periods of time, in order to ensure their entrance into the cecum, is apparently the best mode of treatment

for these worms. It is necessary to work out for each drug the minimum dose which exerts any anthelmintic efficacy, as it appears from experiments that too small doses will have no effect even if administered over very long periods. Fortunately, the whipworm appears to have comparatively little resistance to drugs that actually reach it. This is the more surprising in view of the fact that the whipworm has the habit of sewing the long narrow anterior portion of its body into the mucosa. It may be that the exposed posterior portion is the part through which the anthelmintic takes effect, or it may be that the anthelmintic is absorbed by the cecal mucosa and takes effect, perhaps by ingestion, on the part buried in the mucosa.

In man, the presence of the appendix constitutes another complication. Presumably only a part of the intestinal contents which pass the ileo-cecal valve enters the cecum, and of this only a part in turn enters the appendix. In other words, it would probably take a certain amount of repeated treatment to remove worms from the cecum and an even greater amount of treatment, as a rule, to remove them from the appendix. Berard and Vignard[8] state that it has not been proved that anthelmintics exert any effect on parasites in the appendix, and that Railliet's clinical experiments seem to show that the worms remain alive after the administration for several days of the most powerful vermifuges. Berard and Vignard reach the rather surprising conclusion that it is necessary to respect the appendix as a step in eliminating intestinal worms.

(d). Just in passing, it may be noted that in the field of veterinary medicine the administration of anthelmintics is complicated by anatomical considerations in the case of the host animal which are not present in the case of man. Thus the work of Hall and Foster in the Bureau of Animal Industry showed that in a general way volatile anthelmintics, such as chloroform, should not be administered to ruminants, not only because of the incidental danger of inhalation pneumonia, but also for the reason that such substances go very largely to the rumen, or storage stomach, and are absorbed with resultant systemic effects before they can pass to the abdomen, or true stomach, to exert anthelmintic action. This finding has recently been published in a note by Dr. Ransom, the chief of the Zoological Division of the Bureau. It is probable that the substances named are largely volatilized by the time they have passed through the esophagus.

3. Fluid extracts or other preparations using alcohol as a

solvent for active anthelmintic ingredients are frequently unsuitable as anthelmintics.

Experiments in this laboratory on a number of such preparations indicate that there are good objections to some of these preparations. In the first place, the very fact that alcoholic preparations are adapted to the production of rapid systemic effects—the effects one wishes to avoid in using the characteristically toxic group of drugs known as anthelmintics—is one reason why they are unsuitable as anthelmintics. These alcoholic preparations are often rapidly absorbed, largely in the stomach and duodenum, occasioning more or less irritation at the point of absorption and producing systemic effects of a more or less toxic nature. The considerable and rapid absorption leaves a comparatively small amount of drug available for actual anthelmintic action, and by the same token leaves the minimum of drug that could possibly be removed by purgation after exerting its anthelmintic effect. In the writer's opinion some alcoholic preparations of anthelmintics are distinctly dangerous to the host animal and relatively ineffective against parasites, and this opinion is substantiated by quite a number of experiments in this laboratory and seems to accord with the record of a number of "worm remedies" of this character.

This opinion is rather contrary to that expressed by Eeckhout. He makes one group of anthelmintics for those which are toxic and highly soluble and in which the absorbed material is rapidly eliminated. The important members of this group he names as follows: Turpentine, carbon bisulphide, chloroform, ether and alcohol. According to him, turpentine and carbon bisulphide are very toxic for intestinal worms, while chloroform, ether and alcohol are much less so, but also less dangerous to the host. He states that it is always an advantage to incorporate in a vermifuge some such narcotic as chloroform, ether or alcohol. In the writer's experience, turpentine is distinctly anthelmintic; carbon bisulphide is apparently anthelmintic but needs further study to determine its indications; chloroform has decided anthelmintic value against hookworms, but comparatively little against ascarids, whipworms, etc.; ether has very little anthelmintic value; and alcohol has practically none. If alcohol had anthelmintic value, it would appear that the human race should have been freed from most of its parasites long ago. Moreover, as stated above, experiment shows that alcohol is distinctly disadvantageous in some anthelmintics; it makes some active principles soluble, but while the absorbed alcohol

solvent is rapidly eliminated, the active anthelmintic ingredients simultaneously absorbed are not rapidly eliminated but are left to injure the host animal. If alcoholic preparations of anthelmintics are to be used at all, it would seem advisable to dilute them very greatly before administration in order to throw the anthelmintic out of solution and delay absorption. In some anthelmintics it is probable that the active constituents would be promptly thrown out of solution on contact with the buccal, esophageal and gastric mucosa, and that there would be little or no rapid absorption.

It is interesting to note that Bozzolo[9], who was the first to use thymol against hookworm, in 1879, originally advocated the administration of a glass of strong wine or some alcoholic mixture after each dose of thymol in capsules, in order to facilitate solution of the drug. Thirty years later, he is still of the opinion that his patients were not poisoned and thinks the thymol was probably more effective when given in this way.

4. Anthelmintics of the supposedly insoluble type are not as insoluble as they are commonly supposed to be.

This fact was shown in the investigations of thymol by Schultz and Seidell[10] and by Seidell[11]. Seidell states: "Of the thymol administered, from one-half to two-thirds is apparently destroyed or temporarily fixed in the body." "The simultaneous administration of olive oil apparently caused very slight if any effect upon the percentage of excreted thymol. It is a question, therefore, whether oils really increase the amount of absorption of thymol or only the rate."

The writer's experience bears out what is said and suggested above. In giving large or repeated doses of oil of chenopodium, the feces commonly have the distinctive odor of this oil, but small doses do not give this result as a rule, and must be very largely absorbed. The elimination of this drug or its fate after absorption does not appear to have received sufficient study as yet. Salant and Livingston[12] state that after intravenous injections of large amounts of oil of chenopodium it may be detected in the respired air, but not in the urine or bile. However, I have been unable to find any papers dealing with tests for oil of chenopodium in the urine or stating the form or product in which this oil might be expected to occur after absorption and modification in the body.

There is quite a little written in the literature of anthelmintics in the way of warning regarding the use of such solvents as castor oil, milk, alcohol, etc., in connection with the use of certain drugs,

such as thymol and oleoresin of male fern. It is commonly stated that as these drugs are soluble in the solvents specified, the use of these solvents will result in the absorption of an otherwise comparatively insoluble drug. It appears from the work of Schultz and Seidell and of Seidell that these comparatively insoluble drugs are largely absorbed in any case, regardless of the simultaneous use of such solvents as olive oil. Seidell makes the suggestion, noted above, that oils increase the rate of absorption rather than the amount. This seems to be a very good point and one that deserves some elaboration. In my opinion, there are two factors to consider in connection with the rate of absorption. One is the local effect of rapid absorption and the other is the systemic effect. When such toxic drugs as anthelmintics are rapidly absorbed, it means that the brunt of the irritation and insult due to the drug is borne by a rather limited section of the digestive tract; that a large amount of comparatively concentrated drug is taken in over the gastric and duodenal mucosa, and possibly by that of the upper jejunum. Experiments, clinical symptoms, and the occasional necropsy on the human victim of an overdose of anthelmintic show that such drugs as male fern, thymol or oil of chenopodium can be highly irritating to the digestive tract when absorption is sufficiently rapid. In experiments in this laboratory, the postmortem examination after the ingestion of these and similar drugs not infrequently shows an unsuspected degree of gastro-enteritis and suggests that this condition is present in the human patient rather often, an idea which finds support in many published reports. In addition to the local irritation of the digestive tract by rapidly absorbed anthelmintics, there is the factor of the systemic effects due to the sudden imposition of a considerable amount of anthelmintic which must be disposed of by the body economy in bulk instead of piecemeal. It would appear that what is desired in anthelmintic administration is, first, as little absorption as possible, and second, since there must be some absorption, probably a large amount as a rule, it is desirable to retard that absorption in order to distribute it over as large a surface of the gastro-intestinal mucosa as possible and to allow the maximum time for the body gradually to dispose of the drug by oxidation and elimination.

In this connection I wish to note that in my experiments olive oil seemed to be decidedly contraindicated in common with anthelmintics, whereas I did not find this to be the case with castor oil. Salant and Nelson [13] state that oils and fats, including olive

oil, probably reduce the toxicity of oil of chenopodium, though they did not find this action constant. It is possible that they are right in attributing such a result to the modifying action of glycerides, as well as to the suppression of acute symptoms by the oils, and yet other factors may offset this action. In the case of olive oil, our postmortem examinations indicate that mixtures of this oil and oil of chenopodium are absorbed largely in the stomach of experiment dogs with the production of gastritis, sometimes very severe. In this connection we may note the following statements in regard to olive oil by Asnis[14]: "Because hydrochloric acid has no effect on the olive oil and because of all foods it remains longest in the stomach, hence as a lubricant and as a protective agent it is unexcelled." Chenopodium itself exerts a depressant effect on the musculature, tending to produce stasis. In our experiments, the tendency of a mixture of olive oil and oil of chenopodium is to remain in the stomach until largely absorbed, causing gastritis, and this constitutes an objection to the combination. It is undesirable that an anthelmintic intended to remove worms from the small intestine should remain in the stomach producing irritation and undergoing absorption. In other words, the action of the olive oil is very similar in this respect to that of alcohol.

It is the purgative character of castor oil, its tendency to move promptly through the digestive tract, which appears to be responsible for the more satisfactory results obtained from the combination of castor oil and oil of chenopodium. Although there is absorption of castor oil as well as of olive oil, the absorption of castor oil appears to be such as to distribute the chenopodium content over a wider area and a longer period of time.

As regards the common statement that castor oil should not be given in connection with the oleoresin of male fern, I hesitate to question what is evidently intended as a safeguard in the administration of this drug. However, I wish to state that I have given oleoresin of male fern in doses of 20 mils, a dose Winslow [15] mentions as lethal, to a number of dogs as follows: Dog No. 145, weighing 11.5 kilos, received 20 mils of oleoresin of male fern and 60 mils of castor oil; the dog survived the treatment and was killed 6 days later. Dog No. 131, weighing 7.5 kilos, received 20 mils of oleoresin of male fern and 60 mils of castor oil; the dog survived the treatment and was killed 8 days later. Dog No. 171, weighing 8.25 kilos, received 20 mils of oleoresin of male fern and 30 mils

of castor oil; the dog survived the treatment and was killed 8 days later. Dog No. 172, weighing 10 kilos, received 20 mils of oleoresin of male fern and no castor oil; the dog was very sick and died the sixth night following the treatment. Dog No. 185, weighing 8.5 kilos, received 20 mils of oleoresin of male fern and 6 grains of calomel; the dog survived the treatment and was killed 9 days later.

The above experiments indicate that oleoresin of male fern is more dangerous without the administration of a purgative than with the administration of a purgative; that it is more dangerous without purgation than with the use of castor oil as a purgative; that so far as our experiments show anything—and we do not regard these experiments as conclusive, of course—adequate doses of castor oil, promptly administered, are as good in this connection as calomel, and perhaps as good as anything. Without caring to take a radical position in this matter, we are of the opinion that caution in regard to male fern should emphasize the need of adequate purgation rather than the danger from castor oil. If castor oil were as dangerous as it has been said to be, its use should make a sub-lethal dose lethal by increasing absorption: in actual tests its use makes a dose that is lethal in the absence of purgation non-lethal by aiding in elimination. Whether there is a dose of oleoresin of male fern of over 20 mils that would be non-lethal to an average-sized dog in connection with the use of some such purgative as a saline and lethal in connection with castor oil, I do not know. However, I am inclined to doubt it. I am inclined to believe that the distributive and purgative action of castor oil goes far to offset the solublity factor in the case of male fern. Winslow and many other writers have published prescriptions or given directions for the use of castor oil as a purgative for male fern, and anthelmintics are marketed which contain both ingredients. As far as solubility is concerned, oil of chenopodium is as soluble in castor oil as male fern is, perhaps more so, but many experiments with oil of chenopodium indicate that its administration in castor oil gives superior anthelmintic value against some species of worms, at least, and maximum safety to the host animal. In support of this last statement and of the foregoing contentions in regard to the danger in the use of olive oil, the following experiments may be noted:

Dog No. 29, weighing 10 kilos, was given 90 minims of oil of chenopodium in soluble elastic capsules, preceded by 65 mils of

olive oil and followed by 35 mils of olive oil. This was in the morning. Examination two and a half hours later showed that the dog was very sick, and it was given an additional 50 mils of olive oil. The dog died that night. Postmortem examination showed the stomach to be intensely hemorrhagic and the entire intestinal tract inflamed. The dose given was a lethal dose and the 150 mils of olive oil did not protect the dog against it.

Dog No. 29, weighing 10 kilos, was given 90 minims of oil of chenopodium in soluble elastic capsules, preceded by 45 mils of castor oil and followed by 45 mils of castor oil. Examination an hour and a quarter later showed that the dog was sick but sitting up, and it was given an additional 35 mils of castor oil. The dog seemed all right the next day and was killed the fourth day. On postmortem all the viscera appeared to be normal, except for an inflamed area in the rectum. The dose given was a lethal dose, but the 125 mils of castor oil afforded ample protection against it.

Dog No. 46, weighing 25 kilos, was given 20 mils of oil of chenopodium in soluble elastic capsules, 2 mils of chloroform, and 60 mils of castor oil; 7 days later, this dog was given 75 minims of oil of chenopodium, 5 mils of chloroform, and 60 mils of castor oil. Thirteen days later this dog was given 75 minims of oil of chenopodium in soluble elastic capsules, 5 mils of chloroform, and 60 mils of castor oil. In two weeks, therefore, the dog received 170 minims of oil of chenopodium, or almost 3 drams, in addition to 12 mils of chloroform. The dog was killed on the twenty-fifth day and the stomach showed a couple of small inflamed areas, the duodenum was slightly congested and the cecum showed two small inflamed areas. I assume that the large dose of castor oil administered to this dog protected it from injurious effects from the chenopodium.

In a series of dogs given oil of chenopodium in therapeutic dose accompanied by olive oil alone or by olive oil and some purgative, almost all of the dogs showed a hemorrhagic condition of the stomach or small intestine on postmortem, a condition which was rarely met with in postmortem examination of a large series of dogs given oil of chenopodium in therapeutic dose accompanied by castor oil. It may also be noted that where olive oil alone was given with the chenopodium, the dogs were usually much constipated and often did not pass feces for several days, a condition which must ensure the absorption of practically all the chenopodium given.

5. Anthelmintics, at least some anthelmintics, probably do not need to be allowed "time to act" on the worms before purgatives are administered.

The above proposition is stated tentatively. It is so generally believed and stated that anthelmintics should be allowed time to take effect before any purgation is attempted, that it seems almost unsafe to dispute the proposition. Dock and Bass [16] even explain the failure of remedies to act effectively as possibly due to "the rapid carrying down of the thymol by peristalsis to below the location of the worms," even in the absence of purgation. My own experiences have led me to fear more the absorption of the drug in the stomach before reaching the site of the worms. In over two years' experiment work, involving the treatment and postmortem examination of over 250 dogs, the results seem to be a little better, if anything, where the anthelmintic and the purgative are administered simultaneously than where the anthelmintic is allowed to precede the purgative by an hour or longer. Such combinations as oil of chenopodium and castor oil, chloroform and castor oil, santonin and calomel, etc., seem to be as effective as the ingredients of the combinations administered separately and at intervals. It is well known, of course, that such anthelmintics as areca nut are themselves purgative and that some ordinary purgatives are to a slight extent anthelmintic, though not to the extent that they deserve to be called anthelmintics.

Even if it were true that anthelmintics are more effective if purgation is postponed, and it can be shown that the patient is safer where the purgation is given with the anthelmintic, would it not be good practice to repeat a safe treatment oftener than to give a less safe treatment fewer times? Of course, in practice there are other factors involved.

6. Preliminary fasting is important.

This proposition is generally accepted, though an occasional writer seems to regard preliminary fasting as of little importance. Experiments in this laboratory and in the U. S. Bureau of Animal Industry have convinced me that it is bad practice to give anthelmintics to patients with a stomach full of food. The drug is diluted to a point where it exerts a minimum amount of effect on the worms, and sometimes a drug of known potency in adequate therapeutic dose will fail to bring away any worms when given to experiment animals under these conditions. During gastric di-

gestion there is a hyperemic condition of the gastric mucosa and the absorption processes are active, so that a certain amount of the drug is probably absorbed at this point. Such of the anthelmintic as leaves the stomach with the chyme is too diluted, and the worms themselves are too well screened by the mass of partly digested food to permit of effective anthelmintic action. In our experiments the evidence on this point has been convincing. Attempts to treat animals like sheep and swine by the administration of anthelmintics in the food have resulted in failures or indifferent successes, and it appears that such a line of treatment would have to be prolonged and repeated over long periods to attain any reasonable success, with all that such repetition might involve in the way of cumulative toxic results. In a recent paper the writer [17] has pointed out that the desirability for fasting before anthelmintic treatment was not due, as has been often stated and too commonly believed, to the parasites becoming starved and so ingesting the anthelmintic more readily.

7. Gastric stasis might occasionally interfere with the efficacy of anthelmintics.

I have stated elsewhere [18] that "Nothing known to us in the way of vermifuges can be depended on to remove all worms present even in repeated doses in all cases, as there are conditions little understood which at times appear to inhibit the action of even reliable vermifuges." Some of the postmortem findings on experiment dogs in this laboratory suggest that the failure of anthelmintics might at times be due to gastric stasis. An occasional animal is found with a large, distended, atonic stomach and occasionally dogs are found with a stomach that is apparently normal in appearance, but containing food known to have been fed one or two days previously. It would appear that in such cases anthelmintics might lie in the stomach for long periods or be slowly absorbed there; that where the anthelmintic remained unabsorbed by the atonic mucosa it would sooner or later be diluted by the food and drink subsequently ingested by the animal and so rendered ineffective. It should be admitted, however, that in our cases, anthelmintic treatment was usually as effective as could be expected, though the fact that the anthelmintic in these cases was given with a purgative may explain its prompt passage even from an atonic stomach and its subsequent efficacy. I believe gastric stasis might be reasonably invoked as the explanation for occasional failure in anthelmintic

medication, especially where purgation follows treatment at a long interval and where such depressant or constipating drugs as oil of chenopodium are used.

8. The passage of worms following anthelmintic treatment is a better indication for repeating or continuing treatment than for stopping treatment.

As has been noted previously in this paper, the action of oil of chenopodium against ascarids is the only case in which we have commonly found approximately 100 per cent efficacy against worms in single, therapeutic dose of an anthelmintic, and this drug will occasionally fall below this point in efficacy. In common practice too many medical men regard the passage of worms as evidence that the treatment has done its work, whereas the real test of an anthelmintic is to be made on the basis of the worms not removed. A patient may pass a large number of worms, and have a much larger number left. When a well-selected treatment finally fails to bring away worms it establishes a fair presumption to the effect that all worms of the sort involved have been removed. This, of course, should be checked up by a consideration of the persistence or disappearance of symptoms, and, even more, by microscopic examination of the feces for parasite eggs. The latter should extend over a period of perhaps two weeks after treatment and should cover several days in that period if accurate information is desired, as it seems well established that anthelmintic treatments may inhibit worm egg production for some time, and it requires several negative examinations of feces to establish a fair presumption in favor of freedom from infestation where infestation is suspected or known to have existed.

9. Severe helminthiasis calls for caution in administering anthelmintics.

In other words, severe helminthiasis, with a feeble, emaciated patient suffering from enteritis as a result of numerous worms and with the bodily resistance already much lower as a result of worm toxins, is itself a contraindication for anthelmintic treatment both as regards the production of local irritation in the digestive tract and the producton of toxic systemic effects. More than once I have had weak experiment animals heavily infested with worms die soon after the administration of an anthelmintic. It is quite likely that these animals would have died very soon as the result of worm infestation, but it was evident that the ordinary plan of attack,

suitable for reasonably strong animals with moderate infestations, was not suitable for these animals. It has been recognized in dealing with hookworm disease in man that bad cases, with pronounced anemia and well-developed clinical symptoms of the disease, must be treated with caution. The value of using repeated small doses of anthelmintic in such cases has been emphasized by Stiles and Leonard [19], and various writers have noted the need for preliminary building up of the bodily resistance by nutritious food. In the field of human medicine there is no disposition to overemphasize this factor, but in the field of veterinary medicine it is not an uncommon thing to find writers who regard food as of more importance in cases of parasitic infestation than anthelmintics. This phase of therapeutic nihilism is explained by its advocates on the grounds that parasites do not seem to thrive in thrifty animals; the more obvious statement of this condition would be that thrifty animals are thrifty because, for one thing, of their freedom or comparative freedom from parasites. Therapeutic nihilism in the field of anthelmintics has little to sustain it. While the drugs used in this capacity are in need of much more study, they nevertheless include a number of demonstrably potent drugs serving a purpose that cannot be served by any means other than medicinal, except by way of prophylaxis.

10. While the majority of worms passed after anthelmintic treatment come away in the first 24 hours after treatment, there is a fairly large percent which will commonly come away from one to six or seven days later.

This delay is perhaps due to a poisoning of the worms which weakens or sickens them to the point where they are brought away some time after the anthelmintic treatment, or in other cases it appears to be due to intestinal stasis, which may not be overcome by the purgation employed. In our series of experiments on anthelmintics in this laboratory, using dogs as experiment animals, we found the following to be true where single treatments, not involving more than a few hours of one day, were given:

a. Ascarids: Approximately 82.7 percent were passed during the day after treatment, i. e., within 24 hours after treatment; 7.7 percent were passed the second day after treatment, i. e., within the second 24 hours; 4.3 percent were passed the third day after treatment; 3.1 percent were passed the fourth day; 1.5 percent were passed the fifth day; 0 percent were passed the sixth day; 0.5 percent were passed the seventh day.

b. Hookworks: Approximatly 74.1 percent were passed the first day after treatment; 15.7 percent were passed the second day; 7.4 percent were passed the third day; 2.8 percent were passed the fourth day; 0 percent were passed the fifth, sixth and seventh day.

c. Whipworms: 57.6 percent were passed the first day; 15.2 percent were passed the second day; 18.2 percent were passed the third day; 10 percent were passed the fourth day; 0 percent were passed the fifth, sixth and seventh days.

d. *Dipylidium spp.:* 91 percent were passed the first day; 7.4 percent were passed the second day; 0 percent were passed the third day; 1.6 percent were passed the fourth day; 0 percent were passed the fifth, sixth and seventh day.

e. *Tænia spp.:* 100 percent were passed the first day; 0 percent were passed the second to the seventh days inclusive.

The number of experiments involving *Tænia* is really too small to warrant any general conclusions, but, accepting them on a par with the other findings, we may summarize the foregoing as follows:

For all worms concerned, after one anthelmintic treatment, from 57.6 percent to 100 percent of the worms came away the first day; in other words, a majority, over 50 percent, of those that came away within 24 hours after treatment. Aside from Tænia, where the percent for the second day drops to zero, there came away during the second day, from 7.4 percent to 15.7 percent of the worms that were removed. During the third day, or the third 24-hour period, there came away from 0 to 18.2 percent of the worms removed. During the fourth day, there came away from 0 to 10 percent of the worms. During the fifth day, there came away from 0 to 1.5 percent of the worms. There were no worms passed on the sixth day. On the seventh day, there came away from 0 to 0.5 percent of the worms passed. It must be understood that these figures are merely statement of the findings in our experiments, not at all intended as a statement of a rule, but they suggest that the physician who takes into account the feces for only 24 hours after treatment, may overlook things of importance.

The number of worms passed diminshed each day with *Tænia* and hookworms; it diminished to zero on the sixth day with ascarids, but rose on the seventh day slightly; it diminished to zero on the third day with *Dipylidium*, but rose slightly on the fourth; it diminished on the second day with whipworms, but rose on the third, diminishing from there on to zero on the fifth day. An

examination of the figures for these worms seems to warrant the belief that with sufficient figures, all these worms would show a smaller number passed each day with the exception of the whipworm; there appears to be some ground for thinking that there is little difference in the chances of whipworms appearing the second or third day, and it may be that the number would be steadily greater on the third day than on the second, as a rule. The greater percent of the total number of worms passed which come away the first day is in this order: *Tænia, Dipylidium,* ascarids, hookworms, whipworms.

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A NOTE ON THE FATE OF THE OVA OF ANKYLOSTOMA INGESTED BY THE LARVÆ OF MUSCA DOMESTICA.*

By PERCY LENNARD QUERENS, M. D., New Orleans, La.
Nipe Bay Hospital; Preston, Oriente, Cuba.

Owing to the frequency of feces containing hookworm ova being exposed to flies, and the possibility of mechanical transmission of either the ova or the larval nematodes by the fly larvæ after ingestion, the following experiments were performed:

Infected feces was put into open containers and allowed to become contaminated with the ova of *Musca domestica;* fresh stools were also infected with half grown larvæ. The room temperature averaging twenty degrees Centigrade, the larvæ grew very rapidly and as no water was mixed with the stools the hookworm ova

developed very slowly. The fly larvæ were examined at intervals of twenty-four hours; ten at a time dissected, while a certain number were allowed to pupate.

The larvæ previous to examination were removed from the feces by means of a teasing needle, avoiding as much as possible the feces adhered to the exterior. Further, to avoid the external contamination, they were agitated in frequent changes of clean water, then centrifuged frequently to insure the separation of any ova that may have adhered to them. Centrifuging seems to be especially efficient for the larvæ if not centrifuged over a half-minute. At a speed of about one thousand revolutions per minute they quickly rise to the surface of the liquid when the centrifuge cups come to a stop, leaving the other matter at the bottom.

Dissection can now be performed and the entire intestinal tract gotten out by nicking both sides of the last segment, then pressing one teasing needle on the head and making traction on the last segment when the intestinal tract is pulled out entire. The gut is carefully examined and if any larval worms are present they can be readily seen moving about; in the thinner parts of the intestine, eggs, if present, can be seen, but usually, owing to the dark color of the contents, they are invisible. Numerous small punctures in the wall of the gut are made and the contents are quickly expelled by the peristaltic movements. This is easily examined and if any ova would be present they could be easily identified.

Of one hundred larvæ examined only one showed an ovum in its intestinal tract. This one was almost full-grown and ready to pupate. The ovum was much darker in color, irregular in contour, and in the place of a smooth clear shell only a thin membrane was present with numerous perforations. The contents, instead of being composed of numerous distinct cells, was a mass of clear hyalin material.

The adult flies were examined just after emerging and out of fifty dissections not one showed evidence of either ova or larvæ in their intestinal tracts.

Judging from the above experiments the possibility of transmission of uncinaria either of the ova or larvæ by the common house-fly appears very unlikely, for the ova when ingested seem to undergo digestion and likewise for the larvæ if eaten. Of course mechanical transmission by means of adult flies is an accepted fact, but that does not enter into the substance of this paper.

Further, the larvæ when about to pupate seek the higher dry places in preference to the vicinity of the feces and on emerging come forth clean, leaving all contamination on the exterior of the old pupal shell.

EXCESSIVE FEEDING THE CAUSE OF THE HIGH PER CENT. OF INFANT MORTALITY.*

By J. B. McMAHON, M. D., De Ridder, La.

Statistics show that nearly one-third of all deaths are of infants under one year. All animals rear their young with an almost unvarying certainty of their arriving at maturity without sickness of any sort. The young of man, only, are doomed to run the gauntlet of cruel and needless suffering from which but few more than half their number escape to reach adult age; while as said above, *nearly one-third* of all infants succumb the first year; and few of the remaining two-thirds escape a severe sickness, and about ten percent more die before reaching two years of age.

The infant death rate in New York City, "our great medical center," for the first quarter of this year was 3117; and in that city about fifty percent of the total deaths occur under the age of five years. God did not intend that these little ones should suffer and die any more than he did the young of the brute creation.

Dr. Charles Gilmore Kerley, Professor of diseases of children in the New York Polyclinic Medical School, recommends for a child under six weeks of age, nine ounces of milk, twenty-seven ounces of barley water, four teaspoonfuls of granulated sugar; given two to three ounces at two and one-quarter hour intervals; nine feedings in twenty-four hours. Consider that Prof. Kerley's six weeks' baby weighs ten pounds, and consider the needs of a working man to be equal in proportion to weight, a man weighing one hundred and fifty pounds should take fifteen times the quantity swallowed by the infant, or twenty-two and one-half quarts;—a quart for nearly every hour of the day and night, or allowing nine hours for sleep, then during each of the fifteen waking hours, he must swallow three pints of milk. It can readily be seen that the quantity is several times what could properly be taken in either case.

*Read before the Beauregard Parish Medical Society, June 7, 1917.

As has been indicated, the chief cause of infant mortality is excessive feeding.

From time immemorial the one great anxiety has been to keep the little darlings full of something from the time they come into the world until their little bodies are carried to the grave; or, by strange good luck, they survive until they reach the age of five years, when they are fed on something like the three-meal system, and as a result comparatively few die between five and twenty years of age.

In spite of these figures, or because their significance has not been noted, it has not occurred to the people and to but few doctors to begin with less meals.

Dr. Page, of Boston, in 1879 adopted the three-meal system of feeding his own child from the date of its birth, and she grew to be a healthy, well-developed child; and at four months sat up erect on the floor without support.

A well-fed babe should be comfortable, happy, thriving, with well-rounded body and limbs, as they usually are when they are born, and not gross with fat; wheezing, stuffed with so-called colds, with sneezing and nose running, which is only an effort of nature to relieve the clogged condition of the system produced by excessive feeding.

My observation has led me to believe that too much and too frequent feeding is the cause of a vast majority of gastro-intestinal diseases, instead of the quality of the milk as is usually held to be the cause. One cause of excessive feeding is the desire of the parents to have a fat baby, and to be able to say that he gains a pound a week, entirely ignorant of the normal growth of an infant from birth.

During the nine months of fetal growth, the increase, except in monstrosities, is about one-third of an ounce per day, or two and one-half ounces per week. Why should it be rational for this natural ratio to be increased six or seven hundred percent, directly after birth?

Because of the irrational, forced feeding during the first few months, the usual weight of the shockingly low percent of the little ones, who have survived this unnatural dietary, is much less at five years than if the age of prenatal growth had been continued throughout these years.

The Creator did not intend that a baby's stomach should be

treated like a toy balloon, nor that a baby should suffer any more inconvenience from cutting teeth than the puppy, calf, or colt, but it is the popular idea that when an infant begins to teeth it is peculiarly liable to intestinal trouble. In no sense is sickness an incident of the natural process of teething.

It is simply coincident and arises from the fact that it is at about this age that the system begins to break down under the excessive labor imposed upon the organs of digestion, assimilation, and excretion.

When I am called to a case of summer diarrhea, I stop all feeding for twenty-four hours or longer, with the exception of a little fruit juice occasionally, thereby giving the stomach a rest and nature a chance to eliminate the pathological condition, and then, if I can succeed in having the little patient properly nourished, it soon recovers with very little, if any, medication.

REPORT OF CASES.

1. Chancre of Nipple. 2. Carotid Body Tumor. 3. Ruptured Rectus Femoris Muscle, Chronic Myositis. 4. Dislocation of the Sternal End of the Clavicle (Forward). 5. Fracture of the Surgical Neck of the Humerus. 6. Remarks on Dichloramine T. 7. Splints.

By ISIDORE COHN, M. D., F. A. C. S., New Orleans.

The following cases were reported at the meeting of the Touro Clinical Society, November 7, 1917.

CHANCRE OF NIPPLE.

Case 1. Mrs. D. She first applied for treatment, for a sore on the left nipple, she had been treated by a quack with salves, pastes, and internal medication, etc. When first seen there was an ulcer involving the lower half of the left nipple—the edges were infiltrated, there was an area of redness surrounding the nipple, the glands in the axilla were enlarged. A history of having been bitten on nipple, over a period of three or four months. Wassermann triple plus. She was given three doses of salvarsan at week intervals. Besides the lesion on the nipple, she had a general macular eruption. The lesion cleared up entirely on the breast.

Subsequent treatment consisted of mercury 1 grain, intramuscularly, twice a week and iodide of potassium in increasing doses.

Differential Diagnosis: Chancre of Nipple

History of infection from mucous patches of syphilitic infant or from opposite sex.

Ulceration of neighborhood tissues, redness, even bluish hue may surround area of redness. Enlarged axillary glands, of recent origin. Other manifestations of **Syphilis** may be present. A positive Wassermann and dark field illumination, will clear up the diagnosis.

Paget's disease of the nipple: The earliest symptom appears on the surface of the nipple as a pimple, a pustule, a crack, a red patch, a scab, a horny crust or an excoriation. There may be "weeping," gradually the skin changes extend over the areola. At times there is itching.

When the affection is fully developed the skin is bright red, its surface looking as if lacquered, smooth, eroded, in places superficially ulcerated, and showing sometimes full granulations." "White Epithelial islets are often disseminated on the surface. The borders are always well defined, and polycyclic sometimes distinctly indurated. Often a little clear viscid fluid is discharged from the ulcerated surface or the bloody secretion from the nipple is noticed early in the disease."

In 49 out of 150 cases recorded by Sekiguchi, there was a history of having nursed children. Trauma plays little part. Sekiguchi says the disease "is really a primary cancerous degeneration" of the superficial lacteal ducts. (Abstract from S. Sekiguchi, **Annals of Surgery**, February, 1917.)

Adeno-carcinoma of the Breast. The age of the patient and the absence of a lump in the breast, would help to eliminate carcinoma.

Tuberculosis of the breast. The most frequent initial symptoms of the tubercular mastitis is a painless lump. "Tuberculosis runs a more rapid course than carcinoma" (Deaver).

Early fistulous formations. The majority of patients are robust women. The lymph nodes are enlarged in more than 50 per cent of the cases (Deaver).

CAROTID BODY TUMOR.

Case 2. Mr. A. E. Complaint: Mass in right side of the neck, which interferes with eating, insomnia, because of coughing. Operated

CAROTID GLAND TUMOR.

last year by Dr. S. The doctor was called after he had made an incision. He did not proceed with the operation. The mass has recently increased in size. Examination: There is a mass on the right side of the neck, which extends from the tip of the mastoid, down to the level

of the thyroid cartilage 4½ inches in diameter. The mass is soft, movable, but not fluctuant, nor pulsatile. Over the surface of the mass there are several small nodular masses, probably lymphatics. Tonsils negative, except that the right is pushed forward by the mass. The tongue and buccal mucosa are negative. He has no similar masses anywhere else on body. Veneral history is negative. P.S.T. test 36 per cent. 2 hours. Operation: Believing this mass to be either a **carotid tumor or a lymphosarcoma,** I operated July 20. Ether anesthesia (Dr. Gage) Assistant Dr. Hebert. An incision was made from the tip of the mastoid along the anterior border of the sterno mastoid, as far down as one inch above sterno clavicular joint. After incising and retracting the platysma several large veins came into view. The sterno mastoid had been displaced outward by the prominent mass. A search was made for the carotid artery, below and above the level of the omohyoid. This muscle had evidently been cut out at the previous operation. **A large thick walled non-pulsating cord-like structure occupied the anatomic position of the carotid.**. This "cord" entered the growth. It was impossible to remove the mass without cutting the "cord". Below the level of this cord the innominate and subclavian arteries could be felt. The internal jugular vein was closely adherent to the tumor. In order to avoid serious hemorrhage a large segment of the internal jugular had to be removed. The mass was then removed. On section it was found to contain a vessel with a clot in its lumen.

After the operation was over, the patient had a respiratory failure. After five minutes artificial respiration and amyl nitrite, atropin, oxygen, and lowering of the head of table, the patient began voluntary respiration. Pupils never again reacted to light. Patient however became restless during the afternoon. He moved both extremities. Temperature rose to 105.8° before death, which occurred at 6:30, July 30, 1917. No. autopsy. Dr. Lanford, pathologist, reported growth in right side of neck, tumor from neck; specimen is a mass, about the size of a pear; firm, moist, smooth, and brown in color. The cut surface shows a homogeneous mass and a medium sized blood vessel, somewhat sclerosed. Diagnosis, carotid body tumor.

Carotid Body Tumor. Tumors of this body are rare in the young. one case was reported in a child of seven years. The majority of cases occur over 20 years. These tumors have frequently been described and studied, and only a few of the cases have been diagnosed pre-operative. The embryologic origin of these tumors is still uncertain, yet most authorities to-day consider the carotid body as a part of the sympathetic and the chromaffin systems. Callison and McKenty describe it as a body 5 m. m. long and 3 m. m. wide and about 2.5 m. m. thick, lying in the bifurcation of the common carotid artery, of doubtful origin, and undetermined function, inconstantly present and occasionally giving rise to tumors of definite structure. The carotid body is abundantly supplied with nerves, receiving branches from the vagus, glosso-pharyngeal, superior laryngeal and superior cervical sympathetic. The manifestations of the disease are illustrated by the case cited. The mortality statistics are high. Permanent post-operative complications are frequent, aphonia, hemiplegia and exophthalmos are noted in the literature.

RUPTURED RECTUS FEMORIS MUSCLE.

(Perfect Functional Result.)

Case 3. Mr. W. While running for a base in a game of ball, and without striking anything, he noticed a pain in the left thigh. **He slid after feeling the pain.** The pain did not prevent him from playing the last innings. He walked home without difficulty, used witch hazel and alcohol and obtained no relief. He used Sloan's liniment, which increased the pain. Monday he was unable to attend his duties. Tuesday he was slightly better, after walking the swelling and pain recurred. The knee is swollen, he has no difficulty in bending or extending the leg or thigh.

Examination: There is a mass in the interior aspect of the thigh, the upper limit of which is about three inches; below the anterior superior spine of the ileum, the mass extends downward about 4 inches, the course of the sartoris and rectus. The overlapping skin is not adherent to the mass. No ecchymosis is present. The mass is not painful, it does not fluctuate, nor does it pulsate. It is hard and apparently circumscribed. The obliteration of the lumen of the femoral does not alter the size nor the shape of the mass.

Operation. An incision about eight inches long was made the upper limit being about the level of the saphenous opening, the lower limit about two inches above the knee joint. When the skin was reflected, the sheath of the quadriceps seemed blue; when this was incisted a large amount of organizing blood clot was seen, this blood clot was emptied out, after which we could see that the cavity from which it came was the ruptured belly of the rectus muscle. On further examination, we noticed that the ruptured edges of the rectus muscle belly contained a large number of irregularly shaped islands, which were hard and of a yellowish collor.

TWO AND A HALF MONTHS AFTER EXCISION OF RECTUS FEMORIS MUSCLE.

A careful examination of the entire length of the muscle showed a similar condition to exist in almost the entire muscle. Dr. Lanford made a rush diagnosis and reported "Epithelial type of tumors." The muscle belly of the rectus was excised for a distance of ten or twelve inches. The sheaths of the vastus externus and internus and crureus were sutured together and a small rubber dam drain was placed

in the lower angle of the wound. The skin closed with silk worm gut sutures. Plain sterile dressings were used. Operation lasted one hour. June 9, 1917. Wound healed primary intention. He is able to completely extend leg on thigh. Flexion is good; weight bearing causes no pain.

June 18. Flexion and extension perfect. November 1, 1917, he attends his usual duties.

Dr. Lanford's report: "Microspical examination of sections from the rectus muscle shows marked degeneration changes. These changes are accompanied by reparative processes and replacement of the destroyed muscle by connective tissue. Here and there are noted areas of early bone formation."

DISLOCATION OF THE STERNAL END OF THE CLAVICLE (FORWARD.)

Case 4. Mr. C. R. On Wednesday, October 24, 1917, at about 4 or 4:30 in the afternoon he was jammed by a piece of machinery against a piece of iron. He was brought to Touro immediately. On examination I found the patient to have a feeble pulse, and apparently suffering great pain. Before removing his clothing a hypodermic of morphine 1-6 gr. was given, after which his shirt was cut off. Immediately I noticed marked prominence over the left portion of the sternum, prominence moved with the motion of the arm or shoulder on the left side. The prominence was the sternal end of the clavicle which was dislocated forward. There were several painful areas on the back, but examination revealed no evidence of fracture of the ribs or other injury. The dislocation of the clavicle was reduced, the following dressing applied:

1st. The first roll of Sayre's adhesive dressing, to increase the interacromial distance.

2nd. A Stimson figure eight was next applied over shot bag placed over the sterno clavicular articulation.

3rd. A second and third roll of Dessault's were next applied to hold arm to chest wall to support the arm.

November 7. All dressings were removed. The functional result is perfect. There is still a slight deformity.

Dislocations of the clavicle are rare, particularly of the sternal end. This is the only case of this type which has come under my observation.

FRACTURE OF THE SURGICAL NECK OF THE HUMERUS.

Case 5. Sunday, four days ago, while attempting to catch a moving street car, he struck himself on the shoulder. Was treated by Dr. R. with ice bags, and the patient was comforted by the diagnosis "Sprain." He complains of pain, which is aggravated by lying on the injured side, pain in the shoulder and he is unable to raise his arm up.

Examination, May 24, 1917. The left arm from the axillary fold to within a short distance of the elbow shows a large ecchymotic area. The left arm is larger than the right. Measurements axillary fold 38 c. m. and the right 35 c. m. There is a **limitation of abduction and he complains of pain,** when **pressure is made at the upper end of humerus.** X-ray revealed impacted fracture of the surgical neck of humerus and fracture of the greater tuberosity. Under ether anesthesia the arm was abducted and externally rotated, after breaking up

the impaction the usual dressing, which consisted of the axillary triangle, plaster shoulder cap and light plaster cast including the elbow was applied. After regaining consciousness, following the anesthetic, he did not complain of pain nor discomfort. He left the hospital on May 25. On leaving the hospital he said he was perfectly comfortable. Dressing removed June 2, and Dessault bandage applied. Patient complained of so much pain that I reapplied the original type of dressing. Abduction June 3. This he wore until June 8. Dessault. Dressing changed June 11. No pain. June 15 all dressings removed, arm manipulated, raised to horizontal without pain. Special bandage applied. Binder applied June 18. Able to rotate shoulder—raise arm almost to horizontal. Put hand on opposite shoulder June 30. Dressing removed. No pain. Advised voluntary motion. Nov. 1. He has complete functional activity of shoulder and there is no deformity.

In addition to the clinical cases presented, a report was made on the use of dichloramine T. in cases presenting infection. It has been used on felons, palmar abscess, carbuncles and the like. The experience thus far gained with the use of it has been that the infection cleared up in much shorter time and they required less dressing than with any other method, it is irritating to the skin only in a mild type, when used alone, but *when used in connection with iodin, we have found it is irritating to the skin.* The dichloramine crystalizes at the bottom of the bottle as a result of the admixture with water. Dichloramine solutions in oil are stable, if not exposed to air and light.

The preparation of dichloramine requires the closest attention to the details as given out by Dakin and Dr. Paul Lewis. All utensils must be dry before starting, and if some difficulty is noted in getting it to dissolve in the chlorinated eucalyptol it may be heated to 60°.

Dichloramine T. in oil possesses advantages over the Dakin's solution, or neutral hydrochloride of soda, in that it is more stable, and requires less frequency of dressings and that infection clears up in shorter time.

Splints.

Certain of the newer splints are being utilized in the treatment of fracture: there were demonstrated, Jones Elbow Splint, Grove's Modification of the Hodge's Splint and the Jones Abduction Frame. As a matter of record I wish to quote from a paper which I published in the New Orleans Medical and Surgical Journal in March, 1913, Vol. 65; the paper was read before the State Medical Society, April 24, 1912.

Mr. R. Was found one morning about 2 o'clock on the floor of his bedroom. He had no recollection of having gotten out of bed; all that

he realized was that efforts to move his leg was futile. I saw him two days after the accident and the examination revealed a typical deformity: the foot was everted and the leg shorter. I had him removed to Touro Infirmary, and under slight anesthesia, the leg was manipulated and a cast put on, with the thigh in abduction. He was returned to bed, and the head of the bed elevated. On account of an incontinence of urine and feces the cast became rapidly soiled and it was necessary to remove the cast. **I then decided to have a double modified Thomas Ridlon splint made for him. A cross piece of steel connected the lower cuffs of the brace in such a manner, that any degree of abduction could be maintained. This proved to be very satisfactory. But in spite of every effort he died in three weeks.**

This note is inserted as the abduction modification of the Thomas splint was utilized without knowledge of the Jones abduction frame, if in reality it was made use of by Colonel Jones.

The dichloramine T. which was used was sent to Dr. Matas, by the Surgeon General's office from the Phipp's Institute. Thanks are due to the Surgeon General's office, Dr. Paul Lewis and Dr. Matas for the material used. Special thanks are due to Dr. Paul Lewis for helpful directions in the preparation and use of dichloramine T.

THEORY OF THE GERM OF YELLOW FEVER.

By DR. EDWARD M. ALBERS, Galveston, Texas.

In justice to my father, Dr. Frederick Bernard Albers, of New Orleans, I wish to submit some extracts from records on file at the Louisiana State Board of Health and reports to the General Assembly which prove that he was the first in announcing the theory of germs or microbes being the cause of diseases, especially of yellow fever.

Dr. F. B. Albers communicated these reports in 1870, in his official capacity as Sanitary Officer of the Board of Health of the Second Municipal District of New Orleans, in which 399 deaths occurred that year out of a total in the entire city of 587.

Some of the most interesting and significant are the following:

"In every instance, when a case of yellow fever took place, the house where it occurred, also its immediate neighborhood, were disinfected, by setting free chlorine and sulphurous acid gas in the rooms where death had taken place. The gutters of the yard were sprinkled freely with copperas and carbolic acid, and the carbolo-hydrochloride of iron used as a permanent disinfectant about the sinks, privies and vaults. The

streets and gutters of that portion of the district where the disease prevailed were also disinfected, September 14, by distributing five barrels of lime throughout that particular locality, and following it up on the 15th by distributing two barrrels of carbolic acid, containing 100 gallons, on the same ground. As this appeared to have the desired effect, and the quantity being barely sufficient to give the infected locality a small quantity all around, 200 gallons more were applied on the 19th, 200 on the 20th, and 200 on the 22nd. As it evidently checked the disease and arrrested its progress, the disinfection by carbolic acid was repeated on the 24th, 26th and 27th. The duty was invariably performed at night, to enable the antiseptic properties of the carbolic acid to exert its full influence before the heat of the sun should evaporate it.

"Where thoroughly tried, it has certainly been very satisfactory, and, if properly brought into effect previous to the appearance of any disease, will probably prevent it entirely. I give the following instance as a proof of the value of the mode of disinfection practiced:

"No 230 Chartres street, a tenement-house, running through to Old Line street, containing thirty rooms, was occupied, when the fever made its appearanace there, by thirty families, consisting of 183 persons, all natives of Italy. Of these, 44 took the fever, 14 died, 26 recovered, 4 taken to the hospital. Of the remaining 139 people that did not take the fever, 43 were here less than one year, 32 less than two years, 17 less than three years, 47 over three years. One hundred and thirty-nine people were unacclimated. After the process of fumgation and disinfection, only two more persons were taken sick.

"The contagiousness of the fever has been remarkable when no disinfection was resorted to, as, for instance, at the Louisiana Bakery, where, as men employed there were taken sick and left to go to their friends or to hospitls, new men were employed and put into the same beds and rooms that the others had vacated, and invariably became sick soon after. The same reckless disregard of all moral obligations and duties to others, and particularly to strangers, has furnished almost all the yellow fever patients of the Second District, which district supplies the hospital with fresh cases, derived invariably from the various boarding-houses, principally in the neighborhood of the levee, where the inmates had contracted the disease previously. These fresh cases of yellow fever were new-comers, put into the rooms and beds lately occupied by their sick predecessors.

"To illustrate the contagiousness of the fever, I can refer to several instances that came under my observation. There are three establishments uptown which are in close proximity to each other. One of them is a large corn-mill and the other two are bakeries. They employ a number of men of various nationalities, who sleep, and generally also board on the premises; they were all attacked by the fever about the first of October. The establishments were not disinfected, as the proprietors of them positively refused to have it done, and the fever continued to linger in these places and attack new-comers as they were employed to take the places of their predecessors who had been carried off with the fever, until the 22nd of November, when the last of them died, and the cold weather effectually put a stop to any further infection.

"Another instance also to my personal knowledge: it was that of a lady, uptown, who has some reputation as a 'doctoress,' and took several gentlemen into her house to 'nurse' through the yellow fever. The first cases that occupied her rooms and beds yielded readily to treatment

and were soon convalescent. When they went away and their places were taken by others, although they presented the same mild type of the fever as the former ones when they arrived, they would soon assume a more severe type, and almost invariably proved fatal. And as no fumigation or disinfection was resorted to, it is, without doubt, to be attributed to the influence of the poison from the immediate surroundings to which they were exposed, in addition to that already existing in these sections.

"There were sixteen cases under treatment at the time I took charge of the Fourth District; nine more were taken subsequently, up to the 28th; the last one died on the 23rd. No more cases occurred up to the 4th of October, when I withdrew from the district, as the threatened epidemic had been prevented, and my presence was imperatively necessary in the Second District. When I took charge of the infected district the fever prevailed in that portion of it bounded by Chippewa, Magazine, Sixth and Third streets. It did not spread beyond these limits, owing to the energetic measures taken to prevent it. The means adopted to check the course of the yellow fever were an energetic, thorough and liberal distribution of carbolic acid over the entire vicinity of the infected district, extending its applications as far as the influence of the poison could have prevailed. In this way there were consumed, between Wednesday, the 13th, and Saturday, the 16th, 10,000 gallons of carbolic acid, and it may be said that the entire vicinity was soaked in it. It was freely applied to the filthy streets, unpaved yards, alleys, stagnant gutters and ditches by which all of the streets and many of the houses were surrounded, as well as to manure heaps, collections of refuse and other nuisances which abounded in that neighborhood. Carbolic acid was chosen for this purpose as being the best disinfectant known, as it coagulates all albumen, and is certain to destroy all the forms of life. It volatilizes easily and freely, and thus attacks the hidden germs of disease that float in the atmosphere.

"This process of disinfection was repeated daily, and the atmosphere became highly charged with the vapor of the acid, which found its way into the dwellings of the sick and healthy alike. Many persons fancied at first that the smell produced headache, but most of them soon became convinced of their error, and these persons who dislike the smell and complain of nausea when exposed to it would be similarly affected by any unusual smell, while they can bear patiently with the most loathsome smells because they are familiar with them.

"Notwithstanding this, it cannot be denied that the Sanitary Inspector engaged in its distribution was the most unpopular man in the neighborhood at the time, but the 'end justifies the means,' in this case at least, and the result has been that the disease was checked in its onward course and a malignant and widespread epidemic was prevented. Not a single case occurred beyond the limits where it was raging on the 13th. In the course of a month a few isolated cases made their appearance again, and continued to do so until frost, which coincides with the remark before made, that minute contagious particles will escape destruction, propagate again, and when in sufficient force make themselves felt. The importance, therefore, of continuing the application of disinfectants every three or four days during the season favorable to its development is evident. In no instance has a second case of fever occurred in any house where this course was carried out, but when it was objected to and persistently prohibited by heads of families, several members of the household took the fever in succession."

PROCEEDINGS OF THE AMERICAN SOCIETY OF TROPICAL MEDICINE

A CASE OF DESTRUCTIVE LEISHMANIOSIS.*

By DR. OCTAVE TORRES, Bahia.

(Translated for the JOURNAL by Dr. A. McShane, Greenwood, Miss.)

E. C., female, age 56, white, widow, native of Nazareth (State of Bahia), a resident of the City of Salvador for eleven months, and, for the previous thirty years, of the City of Amargosa, and belonging to the highest social class of this city.

On inspection she shows a complete loss of the nasal pyramid, and around it an ulceration with a yellow floor and covered with granulations, which gives the patient a cadaveric look.

She stated that her disease began with a swelling (we believe that it was edema) of the right side, and localized more or less in the malar region, following the direction of the lachrymal gland of the same side, lasting for about eight or ten days, and undergoing resolution without ulcerating.

After the edema subsided the place remained red, resembling the bite of an insect, for some time, though she cannot recall exactly how long. This localized redness disappeared without treatment at the end of two or three months without recurrence.

Some time after the swelling above referred to, she had inflammation inside the nose on the right side (where, she believes, that the lesion was localized in the sub-septum).

This second lesion healed up, though it never felt completely well, since she felt that the right nostril was somewhat obstructed, for she could not breathe freely through that side. She consulted Dr. Arthur Bastos, who examined her and made a diagnosis of lupus, and he advised her to consult a specialist in the capital (City of Salvador).

The patient lived in Bahia in November of 1904 (about twelve years ago), and consulted the local authorities in that line. The majority of the specialists made a diagnosis of syphilis, while one distinguished professor wavered between lupus and syphilis.

* Read by title before the American Society of Tropical Medicine, New York, June 5, 1917.

This distinguished clinician inclined towards lupus, and prescribed tonics, reconstructives, arsenic, cod liver oil, iodogenol, histogenol, etc.; but, inasmuch as this medication gave no results, he gave intramuscular injections of biniodide of mercury, enesol, etc., and even this did the patient no good.

We saw this patient in the clinic of Prof. Alexandre de Cerqueira in 1906 (that was our third year in the study of medicine), and at that time our illustrious teacher inclined to the diagnosis of lupus.

The patient's nose was then intact; only on the right side, corresponding to the free border of the nasal bone, there was some congestion, and the ulceration inside was not sufficient to cause any great inconvenience, and there was already obstruction of the septum and the lobule of the nose.

At the point above referred to the nasal bones were covered only by the skin, which was extremely thin.

In the following year, 1907, the ulceration appeared externally; the patient said that "the sore inside passed to the outside."

The lesion was never painful, not even itching, and it did not incommode the patient, except for the slight embarrassment in breathing.

The weak skin that protected the internal ulceration, as above stated, sloughed away and opened out, thus initiating a martyrdom for that poor woman to wear a black veil or to live henceforth with a handkerchief carried in the hand and held in front of the face in order to hide the terrible lesion from persons who came near her.

The ulceration (perforation) of the skin at the free border of the right nasal bone continued progressively to descend until it reached the middle part of the nasal pyramid, destroying the entire lobule of the nose, then passing to the left side, leaving only a small portion, a strip of skin three or four millimeters long, which was all that remained of the left nostril, attached to a small part of the lobule (cutaneous portion of the lobule of the nose), which was there united by a small piece of skin, exclusively composed of the sub-septum.

Above, the destruction later involved both nasal bones, the entire nasal pyramid being thus destroyed.

Being consulted in 1907, the illustrious master, Prof. Alexandre de Cerqueira, who had seen her before, ordered a continuance of the same internal medication (cod liver oil, histogenol, etc.), and

he caused her to be treated in the office of rœntgenotherapy of the Faculty of Medicine of Bahia, at that time under the direction of the unfortunate and unforgettable master, Dr. Alfredo Britto. She not only received applications of X-rays, but also the galvanocautery and the Finsen lamp.

We learned the above facts from the patient and from Dr. Vieira Lima, the worthy assistant in clinical medicine, who applied the X-rays and the phototherapy (Finsen light).

She had never suffered from any serious disease. Prior to her present illness she said she had only suffered occasionally from eczema in various regions, principally in the large flexures, lasting from eight to fifteen days, and never appearing twice in the same region. It first appeared on the neck, then in the axilla, the popliteal region, at the bend of the elbows, under the breasts, etc.

This eczema consisted of small vesicles, which burst and gave issue to a liquid, which dried up, and the lesion disappeared without leaving any traces.

She never had an injury, which is a point to which we call attention; she presented no scar, outside of a small one, situated on the left border of the lower jaw, resulting from a thorn which pierced her at the tender age of three years, and which was removed and treated by the family physician. She learned this from her mother.

She had smallpox at the age of six years, and measles at the age of eighteen.

In 1909, while under treatment here in Bahia, she contracted malaria, for which she was treated by our illustrious colleague, Dr. Joao Pondé.

She married when she was twenty-odd years old. She had nine children, and one abortion at three months; this latter, occurring between the fourth and fifth parturitions, was attributed to a fright. Of the nine children, eight are living and in good health; one died of diarrhea at the age of three months.

She always enjoyed good health; she was strong, stout, and accustomed to domestic work. She never suffered from headache.

When at college, in Nazareth, she bled from the nose; however, after the patient began to suffer from her present malady, epistaxis never occurred. She remembers that, a short time before her present disease, she had a copious discharge from the nose (coryza), which passed off at the end of one or two months, discharging, however, many crusts and some liquid transudate.

Before getting the inflammation of the right nostril, and a short time after the coryza above referred to, the nose felt dry, and, when she washed her nose, crusts came out, principally from the right nostril.

Her husband was never a strong man, but neither was he an invalid. He had many scrofulous scars on his neck, when he was young and unmarried. He suffered much from migraine; he had a dry pleurisy many years ago; at times he felt pains, not very severe, in his joints, and which passed off without treatment. He died four years ago, of arteriosclerosis, at the age of fifty years.

The treatment of our patient's affection consisted at first of tonics and reconstructives, when we thought we were dealing with a case of lupus. However, when her medical attendants observed that the lesions did not yield to treatment, they employed intramuscular injections of biniodide of mercury, enesol, etc., making injections alternately, as above mentioned, and the treatment with X-rays, phototherapy, galvano-cauterization, etc., without the slightest benefit, as this lesion continued to extend.

In the interior city where she lived she never abandoned the anti-syphilitic treatment prescribed by her medical attendant.

After having thus exhausted all that medical science could offer in the capital (Salvador) and other cities of the interior, she commenced, in her despair, to use medicines advertised in the daily press: Noqueria's elixir, sarsaparilla, Dr. Humphrey's pills, etc., and homeopathy.

Such is the history of the patient.

We have known this lady from our student days. After we had treated several cases of leishmaniosis we learned that most of the patients came from the zone in which our present patient lived, and we then communicated with the family, and tried to induce the patient to come to Bahia for treatment, for we believed that this was a veritable case of leishmaniosis. We succeeded in this, and when the lady came to our hospital we examined about twenty smears from the nasal lesion. We finally found, after many examinations, a few scatttered Leishman bodies in our specimen.

Even after our delayed clinical examination we believed it was a case of benign lupus, but this was not our first judgment and that of all of the colleagues who saw her on that occasion.

The feature that caused us to hesitate was the period of evolution, which we found very long.

Before finding the Leishman bodies we initiated the treatment with tartar emetic, beginning with small injections of 0.05 gram, on the ground that, if it did no good, it could not do any harm.

The lesion at this time extended on the face in the region of the nose, as far as the neighboring malar regions, right and left, measuring about eight centimeters from side to side, and vertically it extended from the anterior nasal spine below to the interciliary region above.

There was edema around the lesion, and marked hyperemia.

The ulcerated surface had an intensely red color, completely covered with very fine, sand-like granulations, giving off little liquid of a slightly purulent character, at the outer portion. The borders were elevated, well defined, and measured about a millimeter and a half in height.

The inner surface of the lesion was greatly congested, and suppurated freely; there was also an abundant formation of crusts.

This was the condition of the patient when she consulted us before treatment.

When she had improved somewhat she allowed other physicians to examine her. Dr. Eduardo de Moraes examined her nose, ears and eyes on February 1, 1916, at which time the patient had received eighteen injections of tartar emetic.

Dr. de Moraes made the following report on the case:

"In the middle of the face there is an elliptical orifice five centimeters in height and three in width at its widest part, corresponding to the former nasal pyramid, which has been almost entirely destroyed, since there remains only a fragment of the nasal lobule attached to the upper lip, and, on the left side, a small remnant of the cutaneous investment of the wing of the nose. This last piece, adhering to or uniting with the remains of the lobule, aids in forming an orifice which corresponds to the former extremely atresic left nostril.

"On drawing aside the nasal lobule we find the dental arch of the superior maxilla exposed to view, in the space extending from the right canine to its fellow of the opposite side, the roots of which are visible (she has already lost one canine). The incisors are lost.

"The palatine process of the superior maxillary bone presents an oval orifice corresponding to a destroyed portion of bone, and involves about two-thirds of the extent of the process, even being detached from the palate bone. This opening is plainly visible through the mouth, and can be closed by forcing the tongue up into it. There is nothing more to report about the nose, unless it be the inflammation and some crusts formed there.

"There is total destruction of the nasal septum up to the roof of the nose (now converted into one big cavity). The **lamina papyracea** of the ethmoid is covered with soft tissue. The lateral walls of the nose present complete destruction of the inferior turbinalis of the lower

ends of the lachrymo-nasal canals, anteriorly, and the mouths of the Eustachian tubes posteriorly.

"The middle turbinals are preserved; the middle meatus, the infundibular region, and **ostium maxillara** are distinct on both sides.

"The posterior wall of the naso-pharynx appears inflamed and covered with crusts, the lesions extending on the posterior wall of the mid-pharynx, and from the lower pharynx to the vestibule of the larynx, where we find the epiglottis intact, and the arytenoid mucosa inflamed.

"There is also a slight ectropion of the right lower eyelid, in the region corresponding to the inner canthus of the eye, with twisting of the lachrymal orifice following cicatrization of an old lesion which existed there. Lachrymation and chronic catarrh of the conjunctiva, lesions of keratitis, most marked in the left eye, where they occupy a sector more or less triangular in form, corresponding to the oblique meridian of the cornea in an infero-external direction. Besides this, there is a central zone corresponding to the pupillary orifice.

"Ears.—Partial deafness. The drum-membranes are retracted; the light reflex is obscure; the end of the malleus is prominent. Externally, the lesions extending to the malar and gingival regions, are now cicatrizing.

"We note the following fact: the patient never lost her sense of smell; she easily perceives bad odors as well as good ones."

This was the state of the lesions on February 1, almost three months after the beginning of the treatment. This was initiated without the hope of cure, and solely for the purpose of ascertaining the action of tartar emetic in lupus, and we were amazed at the improvement in the patient. We noticed, after the tenth or eleventh injection, at the places where pieces of tissue were removed, that there was frank cicatrization. We invited Dr. Fernand Luz to see the patient. He had seen the patient before the treatment was begun, and he now confirmed our observation, that the lesion was clearly already cicatrizing.

In order to aid the general treatment by tartar emetic, we applied to the ulcer a solution of tartar emetic (1 to 1000) in physiological salt solution with a few drops of adrenalin; we douched out the nasal cavity with the same solution twice a day, morning and night.

We did not try the Wassermann reaction for reasons already given, and the test was not necessary in order to exclude syphilis, since the antecedents of the patient and the inefficacy of the intensive mixed treatment showed the absence of syphilis.

The derma reaction with tuberculin was negative.

It appears to us that in this case there was at first no lesion of the skin, unless we consider as such the small cicatrix situated above the right lachrymal gland, probably in the place where the patient claimed to have had the inflammation before remaining

sick, which brought about the ectropion of the right lower eyelid, as we saw above, and also the lesion of the sub-septum.

We attribute the extension and destruction of the bones (which is the first case of leishmaniosis in which we have had occasion to observe destruction of bones) to the various intemperate treatments which she has undergone. The destruction was probably due to the constant irritation produced by the applications of X-rays, Finsen light, galvano-cauterization, etc., which caused intense congestion of the ulcerated surface for two or three days, and small hemorrhages in the places where the applications had been made.

The patient cannot tell us how the bones were destroyed; she assured us, however, that no fragments of dead bone were ever removed, so that the destruction must have been an insensible erosion.

It appears to us that the process of destruction in this case was one of bony rarefaction, since we had occasion to observe, before the process was checked by treatment, that dead bone was not found anywhere, even in those places where the destructive process took place; the bones were always covered by the fine granulation tissue of the lesion.

We feel that we are justified in using the name of destructive leishmaniosis in this case, and we do not know if any one has ever appplied this qualificative to any similar process.

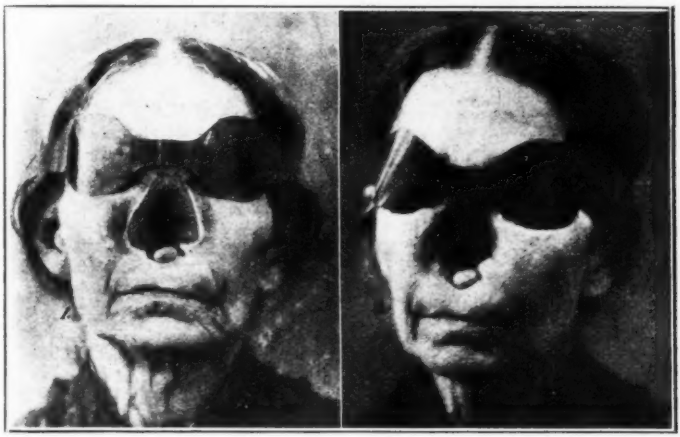
We gave forty intravenous injections of tartar emetic, from 0.05 to 0.10 gram; we did not give any higher doses, because signs of intolerance appeared, and on account of the age of the patient.

The injections were given as follows: November 22, 1915, 0.05 gram; 26th, 0.06; 29th of November and December 3 and 6, 0.05 gram each day; 13th, 0.08; 7th, 0.06; 20th, 0.05; 24th, 0.06 (she felt slight muscular pains); December 29th and January 7th and 10th, 1916, 0.05 each day; 14th, 0.04; 17th, 21st and 24th, 0.05; 28th and 31st and February 4, 0.06 each; 7th, 11th, 14th, 18th, 21st and 25th, 0.05; 28th, 0.06; March 3d, 0.05; 10th, 0.07; 13th, 0.06; 17th, 0.08; 20th, 0.10; 24th, 0.08; April 3d, 0.07; 5th, 0.06; 24th and May 1st, 0.05 gram each day; May 19th, 0.06; 22nd and 26th, 0.08 gram of tartar emetic each day.

The patient complained of rheumatoid pains after the injections of November 24, 1915, of January 10 and 17, 1916; after that of April 8, 1916, she was confined to her bed for several days with influenza. On May 2 we suspended the injections in order to pre-

vent an accumulation of the substance in the organism, and at the end of May we pronounced her cured.

In all, the injections amounted to two grams and forty centigrams of tartar emetic.



Cicatrization was complete; a rosy epithelial investment covered the entire ulcerated part of the nasal and pharyngeal cavities. In the malar and gingival regions there was the formation of new skin and retractile tissue inside the nose, as is shown in the photograph taken after the treatment ended.

We could not secure a photograph before treatment, because the patient would not consent to it. From the time the lesion began to destroy the nasal pyramid, she covered it always with a black cloth, and later with a strip of linen, so that no one could see it; and she never had courage enough to look at herself in the mirror.

At the end of the treatment I suggested a plastic operation to reconstruct the nose, but the patient would not permit it, and she contented herself with wearing a false nose.

COMMUNICATIONS.

REPORTING OF ACCIDENTS FROM LOCAL ANESTHETICS.

Editors NEW ORLEANS MEDICAL AND SURGICAL JOURNAL:

The Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association has undertaken a study of the accidents following the clinical use of local anesthetics, especially those following ordinary therapeutic doses. It is hoped that this study may lead to a better understanding of the cause of such accidents, and consequently to methods of avoiding them, or, at least, of treating them successfully when they occur.

It is becoming apparent that several of the local anesthetics, if not all of those in general use, are prone to cause death or symptoms of severe poisoning in a small percentage of those cases in which the dose used has been hitherto considered quite safe.

The infrequent occurrence of these accidents and their production by relatively small doses point to a peculiar hypersensitiveness on the part of those in whom the accidents occur. The data necessary for a study of these accidents are at present wholly insufficient, especially since the symptoms described in most of the cases are quite different from those commonly observed in animals even after the administration of toxic, but not fatal, doses.

Such accidents are seldom reported in detail in the medical literature, partly because physicians and dentists fear that they may be held to blame should they report them, partly, perhaps, because they have failed to appreciate the importance of the matter from the standpoint of the protection of the public.

It is evident that a broader view should prevail, and that physicians should be informed regarding the condition under which such accidents occur in order that they may be avoided. It is also evident that the best protection against such unjust accusations, and the best means of preventing such accidents, consist in the publication of careful detailed records when they have occurred, with the attending circumstances. These should be reported in the medical or dental journals when possible, but when, for any reason, this seems undesirable, a confidential report may be filed with Dr. R. A. Hatcher, 414 East Twenty-sixth street, New York City, who has been appointed by the committee to collect this information.

If desired, such reports will be considered strictly confidential, so far as the name of the patient and that of the medical attendant

are concerned, and such information will be used solely as a means of studying the problem of toxicity of this class of agents, unless permission is given to use the name.

All available facts, both public and private, should be included in these reports, but the following data are especially to be desired in those cases in which more detailed reports cannot be made:

The age, sex and general history of the patient should be given in as great detail as possible. The state of the nervous system appears to be of especial importance. The dosage employed should be stated as accurately as possible; also the concentration of the solution employed, the site of the injection (whether intramuscular, perineural or strictly subcutaneous), and whether applied to the mouth, nose or other part of the body. The possibility of an injection having been made into a small vein during intramuscular injection or into the gums should be considered. In such cases, the action begins almost at once—that is, within a few seconds.

The previous condition of the heart and respiration should be reported if possible; and, of course, the effects of the drug on the heart and respiration, as well as the duration of the symptoms, should be recorded. If antidotes are employed, their nature and dosage should be stated, together with the character and time of appearance of the effects induced by the antidotes. It is important to state whether antidotes were administered orally, or by subcutaneous, intramuscular or intravenous injection, and the concentration in which antidotes were used.

While such detailed information, together with any other available data, are desirable, it is not to be understood that the inability to supply such details should prevent the publication of reports of poisoning, however meager the data, so long as accuracy is observed.

The committee urges on all anesthetists, surgeons, physicians and dentists the making of such reports as a public duty; it asks that they read this appeal with especial attention to the character of observation desired.

TORALD SOLLMAN, *Chairman,*
R. A. HATCHER, *Special Referee,*
Therapeutic Research Committee of the Council on Pharmacy and Chemistry of the American Medical Association.

TREATMENT OF BAURRI ULCER.

VILLA AMERICANA,
Estado do Sao Paulo, Brazil, S. A., Dec. 6, 1917.

Editors NEW ORLEANS MEDICAL AND SURGICAL JOURNAL:

Sirs—For some time, have been noticing discussions and treat-

ment by various distinguished colleagues of Baurri ulcer, or Leishmaniosis Brazilensis. It is one of the most debated, simple subjects I know of, and one of the most widely scattered diseases. You will find it all along the Gulf States in the United States, down to Argentina, and is simple, yet difficult to cure.

If you will permit me, I will give you a specific, not to take weeks or months to cure, but just a few days. There is no need of deformity or the evil effects of tartar emetic, etc.

Noticing here, where I have been over a quarter of a century, that the native treats his sore with the open method and exposes it to the bright midday sun, with good results, and going on the fact that it is a "bug," I experimented with a lens, double convex, concentrating the sun's rays on the ulcer, carefully burning every part thoroughly until the smoke rose. To my great surprise and delight, the watery secretion ceased immediately and the ulcer healed in one week. Now, I have used this method several years without a single failure, and I challenge the Baurri ulcer that will not heal by this method in just a few weeks at most. It depends upon how long it takes healthy granulations to fill up the destroyed parts.

I have told this before, but it is too simple, I suppose to be tried. Burn the place or places twice a week until all the "bugs" that might be hiding under indurated tissues are killed.

Perhaps the profession does not know that most of these old "set-fast" leg sores are caused from this same insect, called here "Barbeiro." You have it all over the South, and you call it the "blood-sucker" or flying bed-bug. Perhaps they do know it, and I am not aware of same. But one thing I do know is that if the profession will try my remedy it will not use any other. The natives here are very superstitious, and they believe that I bring some medicine from on high to cure the ulcers, and do not give the sun's rays credit for the miracle.

Excuse presumption; were it not that I know countless thousands now and in the future will be benefited, would not intrude where so many distinguished and learned brothers have the floor.

Respectfully,

CICERO JONES.

P. S.—Radium and X-rays also destroy the parasite, but not so perfectly as the sun's rays or so cheaply. An old man's eye-glasses may be used. I have often used them. C. J.

BULLETIN OF THE LOUISIANA STATE MEDICAL SOCIETY

Edited by DR. L. R. DE BUYS, Secretary-Treasurer.

OUR BOYS IN SERVICE.

By a recent action of the Executive Committee of the Louisiana State Medical Society a resolution was passed whereby due recognition is given to those of its members who are in the service of the United States Government. This resolution provides that those members of the Society who are in active service and not in pursuit of their personal and private medical affairs are continued as members of the State Society without the payment of the annual dues. This action is the least recognition which could be given to those who have already made great personal sacrifices in order to attain the end to which our great National Government is striving for the benefit of the entire world and for us as individuals.

The resolution is as follows:

"That it is the sense of the Executive Committee, this day assembled, that the dues be remitted of those of the members of the Louisiana State Meical Society who are in active, continuous military service of the United States Government and who are not in pursuit of their private and personal medical affairs."

The office of the Secretary-Treasurer is dependent upon the Parish Societies for the names of their members who are in service, and in the parishes where no local Society exists the information will be gratefully received from any member.

If dues have already been received by the State Society for any member who should be exempted from their payment they will be refunded. Information from the parish should, therefore, be promptly submitted to the office of the Secretary-Treasurer.

PARISH SOCIETIES SLOW TO REPORT.

There is an unusual apathy on the part of the Parish Societies in making their annual reports. This is especially unfortunate this year, as more concerted action will be required to keep the organization as strong financially as heretofore. Every member should, therefore, consider himself a committee of one on membership to help round-up all the old members and to secure as many

new ones as possible. There should be as many new members added as there are members in service to make the individual membership as valuable as last year. There are several times as many more eligible physicians in the State as members in service, so that if each individual member will do his part he will not only be assisting the Society in maintaining its strength and increasing its membership, but will be contributing to making the State Society more valuable to himself and to the members in service during their absence and upon their return.

NEWS AND COMMENT

Orleans Parish Medical Society.—The annual meeting of the Orleans Parish Medical Society was held at the domicile of the Society, 141 Elk Place, New Orleans, on Monday, January 8, 1918, at 8 p. m. The retiring officers and chairmen of standing committees read annual reports, after which the following officers were installed: Dr. Paul J. Gelpi, president; Dr. Frank J. Chalaron, first vice-president; Dr. Hector E. Bernadas, second vice-president; Dr. E. W. Mahler, third vice-president; Dr. Paul T. Talbot, secretary; Dr. Henry W. E. Walther, treasurer; Dr. H. E. Nelson, librarian; Drs. F. R. Gomilla, W. H. Knolle and J. W. Newman, additional members board of directors. The annual oration was delivered by Mr. William McL. Fayssoux, and Mr. Lynn R. Dinkins and Dr. Paul H. Saunders spoke on "War Savings Stamps." The Service Flag of the Orleans Parish Medical Society, containing fifty-six stars, was presented on behalf of the members by Dr. John Callan, assisted by Troop No. 12, Boy Scouts of America, under the leadership of Troopmaster Lewis R. Graham, while the whole assemblage joined in the inspiring strains of "The Star-Spangled Banner" and "America." The musical program was under the direction of Dr. Homer Dupuy. Refreshments were served with compliments of the retiring board.

American Red Cross Opens French Tuberculosis Hospital.—On Christmas day the first tuberculosis hospital in France was opened in Paris by the American Red Cross. This hospital has been named the Edward L. Trudeau Tuberculosis Sanatorium, and consists at present of only eight beds, but it is hoped to increase the number to 1,200 within the next year. Dr. James L. Gamble, Baltimore, with a staff of Red Cross nurses, is in charge.

MANUFACTURE OF VERONAL AND NOVOCAIN IN THE UNITED STATES.—The Federal Trade Commission has granted to the Abbott, the Rector Chemical and the Farbwerke Hoechst companies licenses to manufacture and sell the preparations heretofore known as veronal and novocain, hitherto controlled by enemy aliens under American patents. The alien property custodians are to receive 5 per cent of the gross receipts.

CONFERENCE OF COUNCIL ON MEDICAL EDUCATION.—The fourteenth annual conference of the Council on Medical Education will be held at the Congress Hotel, Chicago, February 4, 1918. The morning program will be devoted to medical education, and the afternoon session, held jointly with the Federation of State Medical Boards of the United States, will deal with the general topic of medical licensure. On February 5 separate meetings will be held by the Federation of State Medical Boards of the United States and the Association of American Medical Colleges.

ENDOWMENT FOR EUGENIC RECORDS.—The Carnegie Institute recently received from Mrs. E. H. Harriman a donation of $500,000, an office building, a residence and eighty acres of land at Cold Springs Harbor, L. I., to carry on the work of the eugenic records which was begun about five years ago. The institution employs about 100 persons to carry on its researches.

A MERGER OF OPHTHALMIC JOURNALS.—Beginning with January, 1918, there will be published a new monthly ophthalmic journal called the *American Journal of Ophthalmology*, merging the *American Journal of Ophthalmology*, the *Annals of Ophthalmology*, the *Ophthalmic Record*, *Ophthalmology*, the *Ophthalmic Year-Book*, *Ophthalmic Literature*, and the *Anales de Oftalmologia*.

DR. RAMON GUITERAS BEQUEATHED $10,000 to the Columbus Hospital, $5,000 to the New York Academy of Medicine, and $5,000 to the Post-Graduate Hospital.

MUNITION WORKS TO PROVIDE HOSPITALS.—Recommendations were formulated by the sub-committee on industrial diseases, poisons and explosives, for presentation to the Council on National Defense, requiring all munition plants in the United States to establish hospitals under the care of a competent physician and to provide restaurants where the employees may eat without danger of being poisoned by substances used in the manufacture of munitions.

"MEDICAL INCOMPETENTS" TO BE WEEDED OUT.—Under date of December 21, a special announcement from the Surgeon General's office states that, as a result of the unsuitable conditions found in

some of the army camps, steps will be taken to eliminate from the service all officers not fully qualified to perform their duties because of mental and physical incapacity, bad habits or laziness. Those who cannot perform their duties because of unsuitable previous training will be transferred and tried in other positions. If then unable to do satisfactory work, they will be reported to the Surgeon General as unfit and sent before a board with a view to their discharge from service.

Scarlet Fever Serum Discovered.—The Swedish Medical Society recently received the announcement from Dr. Carl Klin, a bacteriologist and an assistant physician in charge of the Stockholm contagious hospital, of the discovery of a serum for scarlet fever. He said that the serum had reduced the mortality in the severest cases to 17 3/5 per cent, against more than 70 per cent in equally severe cases which were not treated with the serum.

To Ask Appropriation for Hospital.—At the next session of the Mississippi Legislature a request will be made for an appropriation of $25,000 to build a new hospital at the Beauvoir Soldiers' Home, to take the place of the old building now in use.

Loyola University Unit.—Dr. Joseph A. Danna has been chosen to head the Loyola University Hospital Unit to Italy. According to report, this unit has been made possible by the generous gift of Mrs. John Dibert, Miss Mae Schmidt and Mrs. Oscar Putman, of New Orleans. The personnel of the hospital will consist of two hundred or more Italian-English-speaking persons mainly, twenty-six of which must be physicians and sixty-five nurses. The chief nurse and seven head nurses will be chosen from the Sisters of Charity. The work of organization of the unit will be pushed, with the idea of its completion as soon as possible. The hospital will be made up of 500 beds.

The *Pacific Medical Journal* Consolidates.—The *Pacific Medical Journal*, the oldest medical journal on the Pacific Coast, which has just completed its sixtieth volume, has been acquired by Dr. William J. Robinson and will be consolidated with the *American Journal of Urology and Sexology*. The combined journal will continue under the editorship of Dr. Robinson and will be published from 12 Mt. Morris Park, West, New York City,

Louisiana State Board of Medical Examiners.—The last meeting of this Board was held in New Orleans, December 6, 7 and 8, 1917, and reorganized, the following members being elected: Dr. L. J. Menville, president; Dr. T. E. Wright, vice-president, and

Dr. E. W. Mahler, secretary-treasurer. Dr. J. G. Martin, the former president, tendered his resignation to enter the army.

Out of eighteen physicians examined, nine passed and were granted certificates. Application of four physicians for reciprocity were approved and certificates granted. Six out of nine midwives passed the examination and received certificates. One application for chiropody certificate was approve and granted.

The successful physicians were. Drs. F. T. Beautrous, C. W. Duval, T. L. Eyerly, C. R. Haley, L. A. LeDoux, T. R. McCarley, S. H. Nothacker, W. O. Schutzmann and D. N. Silverman.

Those granted certificates for reciprocity were: Dr. M. S. Lombard, of Nebraska; Drs. J. H. McCaa and P. L. Perot, of Arkansas, and Dr. J. W. Moore, of Michigan.

Alabama was added to the list of States with which Louisiana reciprocates, making thirty-three in number. The next meeting of the Board will be held in New Orleans, June, 1918.

St. Tammany Parish Medical Society Elects.—The annual meeting of the St. Tammany Medical Society was held in Mandeville, La., January 9, 1918, and elected the folllowing officers for the ensuing year: President, Dr. W. E. VanZant; vice-president, Dr. R. B. Paine; secretary and treasurer, Dr. A. G. Maylie; delegate to the Louisiana State Medical Society meeting, Dr. A. G. Maylie; alternate, Dr. J. F. Polk. The next regular monthly meeting will be held at Mandeville, February 13, 1918.

Report of New Orleans Dispensary.—The regular meeting of the New Orleans Hospital and Dispensary for Women and Children was held on January 8 and reported a deficit of $33, which was caused by the increase in price of all necessities owing to war conditions. The patients treated in the clinic numbered 562; in hospital, 45; operations, 30; no deaths. Donations from various sources during December were acknowledged and a request made that donations be increased in order that expenses may be met.

Anniversary of the New Orleans Presbyterian Hospital.—The ninth anniversary of the New Orleans Presbyterian Hospital was held in the Corinne Casanas Clinic on January 14, 1918. This hospital was founded nine years ago on contributions of three $5 bills and gradually grew into its present flourishing condition. Two years ago the Corinne Casanas Free Clinic for the Poor was added to the hospital, which was made possible by the gift of $20,000, which represented the savings of Miss Casanas. Hundreds of pieces of linen and $300 were presented by the friends of the institution.

The graduation exercises of the 1918 class of trained nurses marked the occasion of the anniversary celebration. The members of the class are: Misses Ernestine Rebecca Waters, Lessie Viola Kelley, Imogene Rolfe, Alice Carey Sampley, Ethel Deo Fullington and Maude Buttner.

REMOVALS.—Dr. M. A. Fort, from Grand Bay, Ala., to Manila, P. I.; Dr. Frederick Gaertner, from 4929 Penn avenue to 222 N. Negley avenue, Pittsburg, Pa.; Lieut. A. W. Williams, M. C., from Manila, P. I., to Hospital Train No. 29, Fort Benjamin Harrison, Indiana.

BOOK REVIEWS AND NOTICES

International Clinics. A quarterly. Vol. I and II. Twenty-seventh series, 1917. J. B. Lippincott Co., Philadelphia. Edited by H. R. M. Landis, M. D.; Chas. H. Mayer, M. D.; Sir Wm. Osler, Bart., M. D. F. R. S.; Rupert Blue, Frank Billings, M. D.; John G. Clark, M. D.; A. McPhedran, M. D.; James J. Walsh, M. D.; J. W. Ballentine, M. D.; Charles Greene Cumston, M. D., and Richard Kretz, M. D.

It is, of course, understood in a work of this character that the subject, for the most part, is treated from the viewpoint of the lecturer and teacher, and seldom, if ever, assumes the nature of an exhaustive or encyclopedic treatise.

The contributors in this, and in Volume II of the same series, are men who have earned the right to a respectful hearing.

Dr. B. B. Vincent Lyon writes on the medical treatment of gastric and duodenal ulcer. While he does not present anything new to the close student of the subject, he has made good use of his material in the thirty-seven pages of his article.

Dr. Russell H. Boggs, Rœntgenologist of the Allegheny General Hospital, writes on the treatment of epithelioma by radium. He says: "Radium and the X-ray, I believe, should always be considered first in treatment of epithelioma, because, when properly applied, practically all epitheliomatous tissue can be made to disappear, and there are fewer recurrences than by any other method. It is a perfectly legitimate method of treatment in proper hands, but is a method liable to abuse if it is not restricted to its proper field." The sixteen plates illustrating his article are well done.

Dr. Curran Pope, in his article on the "Medical Treatment of Poliomyelitis," regrets that the attitude of the profession from a medical standpoint is one of extreme pessimism and that this pessimism extends even to the future therapy of the disease, including the value of vaccine, serum, etc. He is hopeful that, by the use of a non-specific protein substance, the influence of the filterable protein of the disease can be overcome.

The article, "Syphilis as an Etiological Factor in Laennec's Atrophic Cirrhosis of the Liver," by Douglas Symmers, is entitled to close perusal.

In concluding he says: First, that alcohol plays a secondary rôle in the etiology of atrophic cirrhosis of the liver; second, that there is a group of atrophic cirrhoses of the liver of the type described by Laennec, in which syphilis is the primary etiological factor, and alcohol, if it enters into the process at all, is contributory and not essential.

Dr. Max Askanazy, of Geneva, writes on his "Personal Researches on the Natnre of Chloromata"; Dr. P. G. Skillern, Jr., on "Aneurismal Obstruction of Vena Cava Superior, with Special Reference to the Canal Syndrome"; Dr. F. Parker Weber on "Some Adenomatous Tumors of the Abdominal Viscera"; Dr. Albert Abrams contributes an interesting article on his own conception of "The Electronic Reactions"; Dr. Frederick Gardner makes a contribution of his own two cases of "Acne Necrotica"; "The Tangled Skein," a memorandum on neglected Psycopathics," is by Dr. J. Madison Taylor; "A Study in Superstition" is by J. P. H. Murphy; "Health Efficiency of Workers Due to Their Living Conditions" is from the pen of Dr. H. R. M. Landis, of the Henry Phipps Institute, of Philadelphia; "The Treatment of Dislocations and Fractures of the Outer End of the Clavicle" is by Dr. F. M. Cadenat, one time intern of the Paris hospitals, now prosector of anatomy of the Faculty of Paris; "Local Anesthesia in Surgery of the Colon and Rectum" is by Dr. William M. Beach; Dr. William Barnett Owen writes on "Congenital Talipes Equinovarus," with respect to a case of bilateral symmetrical talipes in twins; Drs. Frank A. Craig and John Speese close this very interesting volume with a report on the "Progress of Medicine During the Year 1916."

Volume II of this series opens with a clinic by Dr. Henry A. Christian on "Gout and Infectious Arthritis"; it is well illustrated. "Typhoid Fever, with Complications," is from the pen of Dr. Lewellys F. Barker. Dr. Thomas McCrae presents a diagnostic clinic on "Jaundice (Primary Carcinoma of the Gall-Bladder"). Dr. James J. Walsh contributes an article on "Constipation and Natural Food." He calls attention to the evil of self-medication, particularly with the newest of the line mineral oil for lubrication. Dr. Edward Martin presents "Fractures Clinic," and Dr. Barton Cooke Hirst "A Clinical Conference with the Graduating Class in Medicine of the University of Pennsylvania." Dr. Brooke M. Auspach writes on "Inflammatory Diseases of the Pelvis." "New Ear Tests in Medical and Surgical Diagnosis," by Dr. I. H. Jones, forms a chapter of special interest. He says: "For the new tests of the internal ear, we are indebted to the Vienna group of otologists, notably Robert Barany, who received the Noble Prize of 1915 for this work. This was the first world-wide recognition of the great clinical importance of these studies of the internal ear." This article is illustrated, showing by means of moving pictures how the tests are performed. Dr. Carey Eggleston reviews "Intravenous Medication from 1683 to the Time Ehrlich introduced Salvarsan." In his article on "The Treatment of Syphilis, Dr. Richard L. Sutton makes mention of the work of Schamberg, Kolmer and Raiziss, who hold that mercury is least irritating to the renal epithelium when administered by the inunction method. The now well-known experiments of Wile and Elliot, tending to prove that mercury when smeared on the skin is absorbed by vaporization, are mentioned. The assertion that mercurialized serum is seldom, if ever, now recommended by experienced syphilologists might bring forth objection in some quarters. The author states that, in an analysis of 225 cases, Craig found that, judging from repeated serum tests, the best results

followed intramuscular injections of old salvarsan. At this time, judging from clinical and serological experience which covers over 12,000 injections, the author draws conclusions which the reviewer can strongly endorse. He has only this comment to make, that, in his own experience with this method, although using the best technic, the patients very often complain of the severe pain following the injection, and sometimes object strenuously to this form of medication.

Dr. T. D. Crothers has an article on "Spirit and Drug Addictions." Dr. Smith Ely Jelliffe writes on the "Treatment of the Schizophrenic Patient"; "Medicine and Psychology" is the title of a short article by Daniel M. Hoyt; "Malta or Mediterranean Fever" is by Dr. Jules Bancilhon, of Alais, France, Dr. William R. P. Emerson presents a group study of the result of one hundred physical and mental examinations of so-called well children; "Removal of Molluscum Contagiosum by Means of a New, Simple, Painless Method," is by Dr. M. L. Heidingsfeld; Dr. Alfred Heineberg writes of "The Diagnostic Significance of Uterine Immobility"; "Primary Ovarian Gestation" is by Dr. Simrall Anderson; "The Cause, Significance and Effect of Heterophorias on the General System" is contributed by Dr. Joseph E. Willetts; "A Surgical Clinic" is by Drs. John Speese and P. G. Skillern, Jr.; Dr. George G. Ross makes a "Report of a Burn Treated by Paraffin Protective Dressing"; "Skin-Grafting," by Arthur M. Shipley, is a readable and well illustrated article; "A Report of Three Cases of Brain Surgery," by Dr. Cecil E. Reynolds, is given in detail, and the pictures accompanying it are good. Dr. John Foote's "History of Giovanni Maria Lancisi (1654-1720)" is of more than passing interest. Foote remarks: "In view of the really astonishing amount of original work done by this great pioneer in pathology, it is all the more remarkable that we have learned so little about him."

And so ends Volume II.

STORCK.

Collected Papers of the Mayo Clinc, 1916. W. B. Saunders Company, Philadelphia and London. Vol. VIII.

This volume of one thousand pages contains papers contributed by members of the staff on a wide range of subjects. In this clinic there are no drones, all are workers, and most of them contributors to the accumulating of medical knowledge and experience. It would be impossible, in the space allotted for review, to make anything like adequate reference to the various articles in this veritable storehouse of medical lore.

PARHAM.

Clinical and Laboratory Technic, by H. L. McNeil, A. M., M. D. C. V. Mosby Company, St. Louis, Mo., 1916.

Clinical and Laboratory Technic is divided into three parts, namely. History taking, physical examination, and common laboratory methods used in diagnosis.

Under each heading the author has made subdivisions and all are tabulated in such manner as to make them readily understood and easily followed.

The experience of Dr. McNeil as a doctor and as a diagnostician makes this little volume of especial value to the medical student and general practitioner. He has given in a concise and condensed form the various tests used in making the average laboratory examination.

There is no expenditure of useless words nor repetition of tests, as is frequently found in books on laboratory technic.

The laboratory worker feels a debt of gratitude to Dr. McNeil for having published this very useful little guide.

ELIZABETH BASS.

Medical and Surgical Reports of the Episcopal Hospital of Philadelphia. Vol. IV, for the year 1916.

This volume, the publication of which was made possible by the generosity of a friend, is made up mostly of short papers by members of the hospital staff, but there are also several very valuable articles of greater length. Ashhurst contributes one on "Multiple Cartilaginous Exostoses," one on the "Von Mosetig-Moorhof Iodoform Wax Bone-Filling," and another on "Encapsulated Empyema and Abscess of the Lung," all of which will repay perusal.

It is unfortunate that all good hospitals do not publish such reports of the work of their staff. PARHAM.

A Manual of Otology for Students and Practitioners, by Charles Edwin Perkins, M. D., F. A. C. S. Lea & Febiger, Philadelphia and London.

This volume of 455 pages is the product of a practical teacher having a large experience in clinical work and teaching. The book is designed especially for students who are beginning their otology seriously, and is intended to give him a grasp of the subject in a moderate amount of time with a moderate amount of reading.

The fourteen chapters follow in remarkably good order and the statements are concise. Special attention to the anatomy is given, and the pathological changes are well described, so that the student may well understand what changes are taking place. The chapter on the labyrinth is simple and plain and should apppeal to the beginner. The illustrations are very clear and well placed throughout the text.

The volume as a whole is very desirable to those for whom it is intended. LYNCH.

The Catarrhal and Suppurative Diseases of the Accessory Sinuses of the Nose, by Ross Hall Skillern, M. D. J. B. Lippincott Company, Philadelphia and London.

This volume, the second edition of Skillern's work on the accessory sinuses, stands as one of the pedestals of modern American rhinology and is a contribution for which every American should feel proud—not only because it is the first volume in the English language upon this most important and all-absorbing subject, but because of its completeness in the minutest detail, in the clearness of the descriptions, in the elegance of the illustrations, and in the general arrangement, it is typical of that which we are proud to call American.

This second edition is, as it should be, an elaborate improvement upon the first. The changes in our operative technic are many, and those which have stood the test of time and experience have been added in this edition.

The treatment of the sinuses in children is new and fills a most important place in this modern time. The use of the pharyngoscope, as an aid to diagnosis, is more than worth while. The elaboration of the text on the puncture of the antrum is a timely addition.

The consideration of the treatment post-operative of the sinuses has long been wished for, and, while many different opinions may be ex-

pressed, those laid down in this text are carefully considered and will be a guide to all.

This volume belongs not only to the beginner student or embryo rhinologist, but must be the property of the tried, trusted and experienced rhinologist as well, for in it he will have access to all the improvements that have given satisfactory results.

I most heartily recommend it to you for use on all occasions when thinking of sinuses. LYNCH.

The Animal Parasites of Man, by H. B. Fanthom, J. W. W. Stephens and F. V. Theobold. Wm. Wood & Co., New York.

This work is based on the translation of Braun's fourth German edition, which appeared in 1908, including an appendix by Dr. Otto Seifert. Most of the sections have been rewritten and so completely changed in order to bring them up to date that it makes practically a new work on this important subject.

The book contains over eight hundred pages and is so complete and extensive that no brief review that I could make here would do it justice. It is simply a complete, authoritative book on the subject brought right up to date. Any one who desires information on the animal parasites of man can find it in this book. Symptoms, treatment and much else of practical value are given proper consideration.

C. C. BASS.

Practical Urinalysis, by B. G. R. Williams, M. D. C. V. Mosby Company, St. Louis.

This little volume is intended as a guide for the student and practitioner. Completeness is not claimed. Attention is paid to tests for products of erroneous metabolism or excretion, and a discussion of the interpretation of the findings in such tests. It so often occurs that practitioners are unable to make proper application of the laboratory findings in their cases, especially with reference to the chemical analysis of urine, that it behooves all to pay good attenton to such works as this present one. It contains much of value to the general practitioner and also to the laboratory man. C. C. BASS.

Clinical Bacteriology and Hæmatology, by W. D'Este Emery, M. D., B. Sc., P. Blakiston's Son & Co., London.

This is the fifth edition of a most practical laboratory guide intended originally for the general practitioner. In this edition the author has included some sections which, as he says, will hardly be required by the general practitioner. They are, however, especially useful to the present-day laboratory worker. A section on the "Diagnostic Application of the Blood-count as a whole" will be found useful to general practitioners, many of whom need to inform themselves better on the proper interpretation of laboratory findings in general. C. C. BASS.

Blakiston's Quiz Compends. Materia Medica, Therapeutics and Prescription Writing (Potter). Eighth edition. Revised by A. D. Bush, B. S., M. D. P. Blakiston's Son & Co., Philadelphia.

The editor of this volume announces that it has been thoroughly revised in conformity with the ninth revision of the U. S. Pharmacopeia. As a summarized presentation of the subjects included in its title, the book has a continued popularity, as its eighth edition would indicate.

DYER.

A Compend of Human Physiology, by Albert P. Brubaker, A. M., M. D. Fourteenth edition. P. Blakiston's Son & Co., Philadelphia.

This compend aims at a review of the important phases of physiology for the easy digestion of the medical student. The usefulness of any abbreviated text on so important a subject may be questioned, but, of its kind, this book has always had a place. DYER.

Progressive Medicine. Edited by Hobart Amory Hare, M. D., and Leighton P. Appleman, M. D. Vol. XX. Nos. 1 and 2. Lea & Febiger, Philadelphia and New York.

Aside from the number of valuable contributions which add to the features of these volumes, the timely presentation of current diseases makes the review of large service to the practitioner who is deficient in the practical clinical study of such conditions. For example, Volume I has a considerable space devoted to the infectious diseases, while Volume II has an excellent review of the surgery of the abdomen. The careful selection of material and of contributions continue to be a notable characteristic of this publication. DYER.

The Mastery of Nervousness, by Robert S. Carroll, M. D. The MacMillan Company, New York.

A philosophical attack upon the habits of food and exercise, or lack of it in the average individual, young and older. Throughout there is a helpful minor key which suggests the way of compensation, with the formulæ of the effort needed to such an end. Altogether a timely essay for those who may find the chance to stop by the wayside and listen, and perhaps heed the philosopher. DYER.

Medical Clinics of North America. July, 1917.

As the Chicago Clinics, as a separate publication, cease with the issue of the May number, so, as a separate publication, the Medical Clinics of North America begin with the July issue. This is devoted entirely to the work of Johns Hopkins Hospital, and is known as the Johns Hopkins Number.

The Philadelphia number will record the work of the University of Pennsylvania and the Jefferson Medical College.

The New York number will include Columbia, Bellevue, Cornell and the Post-Graduate School.

The Boston number will embrace Harvard, Massachusetts General Hospital, Boston City Hospital and the Peter Bent Brigham Hospital.

The Chicago number will comprise those institutions formerly included under the caption of the Medical Clinics of Chicago

The contributors to this number are Drs. Theodore C. Janeway, Lewellys F. Barker, Herman O. Mosenthal, Thomas B. Futcher, Louis Hammon and Thos. R. Brown.

We have no adverse criticism to make on this excellent issue. We only ask for the well-deserved support of this admirable series of publications. STORCK.

The Medical Clinics of Chicago. Published Bi-monthly. W. B. Saunders Company, Philadelphia and London. Vol. 2, No. 5, March, 1917. Vol. 2, No. 6, May, 1917.

We do not advocate the substitution of the printed page for actual

attendance on the clinic, but we do think that publications of this character are very useful and stimulating. It is indeed helpful to be able to communicate with the best of our confrères in hours of leisure and to keep up with the splendid work which is being done in our large and progressive clinics.

The contributors to the March number are: Drs. Frederick Tice, Isaac A. Abt, Charles Spencer Williamson, Herman L. Kretschmer, Ralph C. Hamil, Arthur F. Beifeld, H. H. Schuhmann, Solomon Strouse, Charles Louis Mix, Frank Wright, Frank Smithies, B. C. Corbus and Joseph Friedman.

The authors included in the May number are: Drs. Charles A. Elliot, Frank Smithies, M. Milton Portis, Charles Spencer Williamson, Arthur F. Beifeld, B. C. Corbus, Sydney Strauss, Ralph C. Hamill, Charles Louis Mix, Frederick Tice, Walter W. Hamburger, Isaac A. Abt, David C. Strauss and Frank Wright.

These clinics were held in the several hospitals of Chicago, and can be said to be representative of progressive medical thought in this great American city.

With the current (May) number, the Chicago Clinics cease as a separate publication, becoming merged into the Medical Clinics of North America. We wish the venture success. STORCK.

PUBLICATIONS RECEIVED

W. B. SAUNDERS COMPANY, Philadelphia and London, 1917.

Diseases of the Chest, by George William Norris, A. B., M. D.; Henry R. M. Landis, A. B., M. D., and Edward B. Krumbhaar, Ph. D., M. D.

Food for the Sick, by Solomon Strouse, M. D., and Maude A. Perry, A. B.

The Medical Clinics of North America. November, 1917.
The Surgical Clinics of Chicago. December, 1917. Vol. 1, No. 6.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1917.

Diseases of the Skin, by Milton B. Hartzell, A. M., M. D., LL.D.

International Clinics. Vol. IV. Twenty-seventh Series, 1917.

LEA & FEBIGER, Philadelphia and New York, 1917.

Progressive Medicine. Edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. December, 1917.

REBMAN COMPANY, New York, 1917.

A Clinical Treatise on Diseases of the Heart, by Edward E. Cornwall, Ph.B., M. D.

PAUL B. HOEBER, New York, 1917.

Technic of the Irrigation of Wounds by the Carrel Method, by J. Dumas and Anne Carrel. Authorized translation by Adrian V. S. Lambert, M. D., with an introduction by W. W. Keen, M. D., LL.D., F. R. C. S.

THE YEAR BOOK PUBLISHERS, Chicago, 1917.

The Practical Medicine Series. Volume VI. General Medicine, edited by Frank Billings, M. S., M. D., assisted by Burrell O. Raulston, A. B., M. D. Volume VII. Obstetrics, edited by Jos. B. De Lee, A. M., M. D. Volume VIII. Pharmacology and Therapeutics, edited by Bernard Fantus, N. S., M. D. Preventive Medicine, edited by Wm. A. Evans, M. S., M. D.

WASHINGTON GOVERNMENT PRINTING OFFICE, Washington, D., C., 1917.

Annual Report of the Surgeon General of the Public Health Service of the United States. For the Fiscal Year 1916 and 1917.

Commission on Training Camp Activities. (The War Department).

United States Naval Medical Bulletin. October, 1917.

Public Health Reports. Volume 32, Nos. 40 to 51.

Report of the Health Department of the Panama Canal. August and October, 1917.

Safe Milk, by Ernest A. Sweet, Surgeon, U. S. P. H. S. Supplement No. 3131.

MISCELLANEOUS.

The Principles of Acidosis and Clinical Methods for its Study, by Andrew Watson Sellards. (Harvard University Press, Cambridge, Mass., 1917).

Office International D'Hygiene Publique. Bulletin Mensuel. (195 Boulevard Saint-Germain, Paris, France).

Quarterly Bulletin Louisiana State Board of Health. Vol. VIII. September, 1917. (La. State Board of Health, New Orleans).

General Principles of Therapeutics, by Francis H. McCrudden, S. B., M. D.

Latin and the A. B. Degree, by Charles W. Eliot; **The Worth of Ancient Literature to the Modern World,** by Viscount Bryce, O. M. (General Education Board, New York City.)

Transactions of the American Otological Society. Vol. XIV, Part 11.

Sickness Survey of the Principal Cities of Pennsylvania and West Virginia; A Health Census of Kansas City, Mo., by Lee K. Frankel, Ph.D., and Louis I. Dublin, Ph.D. **A Health Census of Chelsea Neighborhood.** (Metropolitan Life Insurance Company, New York, 1917.)

Notes on Parasitic Anaphylaxis and Allergy, by L. Van Es and A. F. Schalk. Bulletin No. 125. Agricultural College, North Dakota.)

Conditions in the Sugar Market (January-October, 1917). (The American Sugar Refining Company, New York City.)

Medical and Surgical Publications of J. B. Lippincott Company, Philadelphia. Since 1792. (J. B. Lippincott Company, Philadelphia.)

REPRINTS.

Intestinal Toxemia and Intestinal Stasis; Diagnosis of Chronic Appendicitis; A Diagnostic sign of Gastroenteroptosis; Obituary of Julius H. Eichberg; Umbilical Dyspepsia. By Charles D. Aaron, Sc. D., M. D.

The Coat of Arms of the Medical Corps. By Colonel C. C. McCulloch, Jr., U. S. A.

The Indication and Abuse of Cesarean Section. By Frederick J. Waas, M. D.

Japanese Medical Literature. A Review of Current Periodicals. (Presbyterian Mission, Shanghai, China).

Alcoholic Inebriety, by Frank Fenwick Young, B. S., M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans, for December, 1917.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	3	2	5
Intermittent Fever (Malarial Cachexia)	2	------	2
Smallpox	------	------	------
Measles	------	------	------
Scarlet Fever	------	------	------
Whooping Cough	1	------	1
Diphtheria and Croup	2	------	2
Influenza	16	14	30
Cholera Nostras	------	------	------
Pyemia and Septicemia	1	------	1
Tuberculosis	66	48	114
Cancer	18	5	23
Rheumatism and Gout	4	3	7
Diabetes	2	2	4
Alcoholism	------	------	------
Encephalitis and Meningitis	2	1	3
Locomotor Ataxia	1	------	1
Congestion, Hemorrhage and Softening of Brain	30	10	40
Paralysis	4	------	4
Convulsions of Infancy	------	------	------
Other Diseases of Infancy	20	4	24
Tetanus	------	------	------
Other Nervous Diseases	6	1	7
Heart Diseases	72	42	114
Bronchitis	5	1	6
Pneumonia and Broncho-Pneumonia	34	22	56
Other Respiratory Diseases	4	1	5
Ulcer of Stomach	------	------	------
Other Diseases of the Stomach	3	2	5
Diarrhea, Dysentery and Enteritis	16	8	24
Hernia, Intestinal Obstruction	5	4	9
Cirrhosis of Liver	7	3	10
Other Diseases of the Liver	4	2	6
Simple Peritonitis	1	------	1
Appendicitis	4	1	5
Bright's Disease	21	13	34
Other Genito-Urinary Diseases	10	10	20
Puerperal Diseases	6	3	9
Senile Debility	6	------	6
Suicide	2	1	3
Injuries	24	20	44
All Other Causes	38	19	57
TOTAL	440	242	682

Still-born Children—White, 17; colored, 16; total, 33.

Population of City (estimated)—White, 276,000; colored, 102,000; total, 378,000.

Death Rate per 1,000 Per Annum for Month—White, 19.13; colored, 28.47; total, 21.65. Non-residents excluded, 16.19.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure. 30.19

Mean temperature. 51

Total precipitation. . . . . 2.16 inches

Prevailing direction of wind, northeast.